



COUNTY COUNCIL OF NORTHUMBERLAND.

ANNUAL REPORT

OF THE


MEDICAL OFFICER OF HEALTH

For the Year 1905,

WITH SUMMARY OF REPORTS OF DISTRICT
MEDICAL OFFICERS OF HEALTH AND
STATISTICAL INFORMATION.

R. WARD & SONS, 31 TO 39, HIGH BRIDGE, NEWCASTLE-ON-TYNE.

1906.



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NORTHUMBERLAND COUNTY COUNCIL.

REPORT OF THE COUNTY MEDICAL OFFICER OF HEALTH FOR THE YEAR ENDING 31st DECEMBER, 1905.

TO THE CHAIRMAN AND MEMBERS OF THE PROPERTY AND SANITATION
COMMITTEE OF THE SAID COUNCIL.

GENTLEMEN :—

I have the pleasure to present my report for the year ending December 31st, 1905, in which I have followed the course adopted in previous years.

Reports were received from each of the medical officers of health in the Administrative County.

Thirty-one of these reports were printed and three (those for the borough of Berwick-on-Tweed, the urban district of Gosforth and the rural district of Bellingham) were typewritten.

It is much to be regretted that the three sanitary authorities last named still fail to print and circulate the annual report of their medical officer of health; these reports contain valuable information relating to the sanitary conditions and requirements of the districts to which they relate and a copy should unquestionably be available for any ratepayer at all interested in public health matters.

I have to thank the district medical officers of health for sending their annual reports somewhat earlier than in previous years. One report was received in January, and twenty-eight during the first quarter of the year, but the last one received did not arrive until May 4th. As I have pointed out on several occasions no calculations can be made as to county rates, etc., until *all* the annual reports are received.

The directions given by the Local Government Board are as follows :—

The report "should be made as soon as possible after the expiration of the year to which it relates. The medical officer of health ought not in general to have any difficulty in doing this within a month or six weeks; but if from any special circumstances the report cannot be completed within six weeks it should be understood that the delay must not be indefinite, and that the report should be in the hands of his council and of the Board within at most three months from the end of the year."

SPECIAL REPORTS.

It is still necessary to point out that in every case in which a medical officer of health sends a special report to the Local Government Board he is required to send a copy of such report to the county council; also that school closure requires a special report to be sent to the Local Government Board and to the county council. Appended are copies of Articles 15 and 16 of the order of the Local Government Board for 1891,

relating to these special reports, and also articles 13 and 14 of a memorandum dated July 1897, having reference to the closure of public elementary schools.

“(15) He shall give immediate information to Us of any outbreak of dangerous epidemic disease within the district and shall transmit to Us a copy of each annual report and of any special report. He shall make a special report to Us of the grounds of any advice which he may give to the sanitary authority with a view to their requiring the closure of any school or schools, in pursuance of the Code of Regulations approved by the Education Department and for the time being in force.

“(16) *At the same time as he gives information to Us of an outbreak of infectious disease or transmits to Us a copy of his annual report, he shall give the like information or transmit a copy of such report to the county council of the county within which his district may be situated.*”

By a later memorandum dated July 1897, the Local Government Board further directs as follows:—

“(13) Reports to sanitary authorities, advising the closure of a school or schools in any district are to be treated as ‘special’ reports within the meaning of the general Order of the Local Government Board of March 23rd, 1891, and copies of them are required by Art. 18 (secs. 15 and 16) of that Order, to be sent to the Board and to the county council. These reports should state the grounds upon which the medical officer of health advocates the closure of the school or schools in preference to the exclusion of particular scholars.

“All notices of the sanitary authority for the closing of public elementary schools should be addressed, in writing, to the managers, and should state the grounds upon which the closing is deemed necessary.”

SANITARY LEGISLATION.

During the year 1905 only three Acts were passed which had any relation to local government or public health—(1) the Agricultural Rates Act, 1896, etc., Continuance Act; (2) the Aliens Act, and (3) the Unemployed Workmen Act. The much needed Bill to amend and consolidate the law of public health, though promised in the King's speech in Feb., 1904, had not up to the end of the year 1905 been introduced.

(1) The Agricultural Rates Act, 1896, etc. Continuance Act caused the Agricultural Rates Act and the Tithe Rent Charge (Rates) Act, 1899, to continue in operation until March 31st, 1910.

(2) The Aliens Act provided for the regulation of alien immigration into, and for the expulsion of undesirable aliens from, the United Kingdom.

In the autumn of the year under consideration a committee was appointed to consider and report on the rules and regulations which should be made to give effect to the Act and to recommend the arrangements necessary for bringing the Act into operation.

(3) The Unemployed Act was passed “to establish organisation with a view to the provision of employment or assistance of unemployed workmen in proper cases.” The Act is to continue in force until August 11th, 1908. Outside London every municipal borough and urban district having a population of 50,000 or more are to establish distress committees who must make themselves acquainted with the conditions of labour within their areas and enquire into the applications made to them by the unemployed. Similar committees can be appointed wherever found to be necessary.

The expenses of this scheme are to be met by voluntary contributions, and any deficiency may be met out of the local rate, the sum contributed out of the rates being limited in any year to the amount which would be produced by a rate of one halfpenny in the pound or by such higher rate not exceeding one penny in the pound as the Local Government Board may approve.

By the Expiring Laws Continuance Act, 1905, the Vaccination Act, 1898, was continued in force until December 31st, 1906.

FACTORY AND WORKSHOP ACT, 1901.

As so many of the district medical officers do not refer in detail to the administration of this Act I have thought it advisable to again append the following remarks:—

The Act imposes certain duties upon borough and district councils and upon medical officers of health.

The council *must keep a register* of all workshops within its district, and also receive twice a year from the occupiers of factories, workshops and workplaces, a list of home workers doing certain kinds of work at home, which lists must be preserved both by the council and by the employers of labour. Register and list of home-workers.

The council may prohibit certain kinds of homework being given out if the places in which the work is to be carried on are unwholesome, or are dwellings where notifiable infectious diseases exist, and even without such prohibition (which if necessary may be issued by two members of the council on the recommendation of the medical officer of health) it is a penal offence to send out wearing apparel to be made, altered, etc., at houses in which the employer knows that Scarlatina or Small-pox exists. House work in unsuitable premises, &c.

The council must be satisfied that in every factory commenced before 1st January 1892, and in every workshop commenced before 1st January 1896, if more than 40 persons are employed, there are adequate means of escape from fire; and in the case of factories commenced after 1st January 1892, or workshops commenced after 1st January 1896, if more than 40 persons are employed, a certificate must be procured from the council that adequate means of escape from fire are provided. Provisions for escape from fire.

The council enforces the provision of sufficient closet accommodation in all factories and workshops if sec. 22 Public Health Acts Amendment Act is in force, otherwise this duty devolves upon the Factory Inspector. Sanitary conveniences.

The council proceeds under the nuisance clauses of the Public Health Act, 1875, in the event of want of cleanliness, airspace and ventilation. Procedure under Public Health Act, 1875.

Bakehouses. The Act requires additional sanitary provisions relating to closet accommodation, sleeping places, limewashing and floor level (secs. 97, 99, 100) and after January 1904 no underground bakehouse can be used unless the council gives a certificate of suitability (sec. 101). Bakehouses underground bakehouses.

If the council fail to remedy any sanitary defects of which the Factory Inspector has informed them and fail to carry out the provisions of the Act, the Factory Inspector may carry out the council's duties, and recover the expenses from the council. Powers of Factory Inspector if council fail to remedy sanitary defects.

The medical officer of health must in his annual report deal with the administration of this Act, and must send copy of this portion of his report to the Secretary of State (sec. 131). Medical officer of health and annual report.

THE MIDWIVES ACT, 1902.

In the year 1903 the county medical officer by direction of the Property and Sanitation Committee reported fully upon the above Act, the powers, duties and obligations devolving upon the council as Local Supervising Authority and some of the difficulties associated with the administration of certain sections.

In the year 1904 the county council, on the recommendation of the Property and Sanitation Committee, appointed a special committee, the Midwives Committee, consisting of seven members of the council and three ladies, with the county medical officer as executive officer.

In order to provide for the supervision of all midwives practising in the county as well as for controlling their practice within proper limits and for the instruction of untrained women the committee recommended the appointment of a lady inspector to act under the executive officer, and that Miss White, the Superintendent of the Northumberland County Nursing Association, should be appointed to this position upon the terms proposed by the aforesaid Association. The Establishment Committee, having approved (with a slight modification) the recommendations of the Midwives Committee, advised their adoption by the county council. The above recommendations were adopted by the council on May 9th, at which date Miss White commenced her duties as Inspector under the Midwives Committee.

The Inspector visited all the midwives admitted to the Roll, in many cases more than once, explaining to each the Midwives Act, the Rules issued by the Midwives Board and their obligations under the above-named Act and Rules. The Inspector, in addition, devoted a considerable amount of time to giving help and instruction to the untrained and uneducated midwives (who had been admitted to the Roll in virtue of their having been in *bonâ fide* practice for twelve months before the passing of the Act) as to the proper conduct of their work, including the precautions to be taken in order to prevent the occurrence of Puerperal fever and the spread of infectious disease, also the keeping of the various records required of them by the Rules of the Central Midwives Board.

Up to the end of the year no midwife had been reported for malpractice, misconduct or neglect to carry out the Rules framed by the Board; no cases of Puerperal fever were reported as having occurred in the practice of any midwife and no necessity arose for any midwife to be suspended or for any inquiry to be held.

During the year forty-one women were admitted to the Midwives Roll; of this number thirty-six held some certificate recognised by the Board and five untrained women were enrolled by virtue of their having been in *bonâ fide* practice for at least one year prior to July 31st, 1902.

At the end of the year one hundred and twenty-three women, eighty-nine trained and thirty-four untrained had been admitted to the Midwives Roll since the Act came into operation; of these, seventy-four (forty-seven trained and twenty-seven untrained) had given notice of their intention to practise as midwives in the administrative county.

The Midwives Act and the Rules issued by the Central Midwives Board had not long been in operation before difficulties began to be experienced by Local Supervising Authorities in interpreting and administering the Act, in arriving at a uniform interpretation of the Rules and in enforcing the latter, especially in the case of illiterate women admitted to the Roll. These difficulties have been the subject of several conferences in Birmingham and London of executive officers acting under the various Local Supervising Authorities, and of much correspondence with the central authority.

The Rules have been thoroughly revised but up to the end of the year had not been re-published, the operation of the existing Rules having been extended to February 12th, 1907.

The number of midwives in the county at present on the Roll and of those pursuing their avocations, though not admitted to the Roll, will in the ordinary course of human events, be considerably reduced before April 1st, 1910, after which date no woman can represent herself

to be "a person specially qualified to practise midwifery, or recognised by law as a midwife" or one who can "habitually and for gain attend women in childbirth otherwise than under the direction of a qualified medical practitioner, unless she be certified under this Act."

It seems probable that this reduction will chiefly take place among those women who have received no training in their work and who were admitted to the Roll in consequence of their having been in *bonâ fide* practice for twelve months prior to the passing of the Act. Some of these are well advanced in years, others are unable to read or write and find a difficulty in getting their register of cases, etc., filled in and some feel that they will not be able to fulfil their obligations under the Act and Rules. Their places will be taken by women properly trained for their work, to the great advantage of the patients they attend.

The Education Committee of the County Council provide the North-umberland County Nursing Association with sufficient funds for the training of six women during each year, all of whom are pledged to act under the Association for three years.

In the month of February the Council, on the recommendation of the Midwives Committee, supported an application from the Worcestershire County Council to the Registrar General to issue instructions to the Registrars of Births and Deaths to furnish the Council with certified copies of all entries regarding the death of midwives in the county, a fee of 2s. 7d. being paid for each certificate.

SALE OF FOOD AND DRUGS ACT.

The samples taken for analysis under the Sale of Food and Drugs Act during the year, and the result of the analyses, &c., are shown in the following table:—

No. of Samples.	Description of Article.	Result of Analysis.	Proceedings (if any).
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For the Quarter ended 31st March, 1905.

10	Whisky	Adulterated	1 Prosecution
1	Lard	Pure	Nil
8	Milk	Pure	Nil
3	Coffee	Pure	Nil
2	Pepper	Pure	Nil
2	Rum	Pure	Nil
5	Butter	Pure	Nil
1	Glycerine	Pure	Nil
2	Vinegar	Pure	Nil
1	Arrowroot... ..	Pure	Nil
1	Sago	Adulterated	Nil
1	Brandy	Pure	Nil
1	Tea... ..	Pure	Nil
1	Sulphur	Pure	Nil

For the Quarter ended 30th June, 1905.

5	Milk	2 Adulterated	2 Convictions
9	Whisky	4 Adulterated	4 Convictions
3	Lard	Pure	Nil
4	Butter	Pure	Nil
1	Brandy	Pure	Nil
1	Pepper	Pure	Nil
1	Vinegar	Pure	Nil
1	Sugar	Pure	Nil
1	Gin	Pure	Nil

No. of Samples.	Description of Article.	Result of Analysis.	Proceedings (if any).
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For the Quarter ended 30th September, 1905.

6	Whisky	Pure	Nil
6	Milk	Pure	Nil
2	Cream of Tartar ...	Pure	Nil
1	Ground Ginger ...	Pure	Nil
1	Liquorice Powder	Pure	Nil
2	Butter	1 Doubtful Genuineness	Nil
3	Lard	Pure	Nil
1	Bramble and Apple Jelly	Pure	Nil

For the Quarter ended 31st December, 1905.

10	Butter	2 Doubtful Genuineness	Nil
6	Whisky	1 Adulterated	1 Conviction
9	Milk	1 Adulterated	1 Conviction
1	Lard	Pure	Nil
2	Vinegar	Pure	Nil
1	Raspberry Jam ...	Pure	Nil
1	Chocolate	Pure	Nil

THE DAIRIES, COWSHEDS AND MILKSHOPS ORDERS.

The adoption of regulations under the Order being optional many sanitary authorities have failed to frame any, and though under Secs. 7 and 8 of the Order, even in the absence of regulations, provision must be made for the lighting and ventilation, including air space, and the cleansing, drainage and water supply being such as are necessary or proper:—(a) for the health and good condition of the cattle in cowsheds; (b) for the cleanliness of vessels used therein for containing milk for sale, and (c) for the protection of the milk therein against infection or contamination; the terms of the Order are so ambiguous that without regulations providing for a definite amount of air space, lighting, ventilation and for the construction of floors, the provision of a water supply, drainage, etc., etc., all the above provisions, as regards their sufficiency, are practically left to the discretion of the Sanitary Inspectors, among whom different opinions are held as to what constitutes “sufficiently”; the difficulties of the Inspectors’ position in the matter are further increased by their having no security of tenure, by owners and occupiers of insanitary cowsheds being directly or indirectly represented on the local authority, and by neither owners nor occupiers, in some localities, wishing for any higher standard of ventilation or cleanliness than at present exists, the former fearing any expenditure being entailed thereby and the latter fearing any increase of rental being imposed. Consequently many cowsheds continue in the same deplorable state as mentioned in previous annual reports and a considerable amount of milk is produced under all the conditions most favourable to the spread of Tuberculosis amongst cows and to its contamination in various ways by dust, dirt, hair and particles of manure with their accompanying living organisms.

The dairies are as a rule in a better sanitary condition than the cowsheds, and the great bulk of the milk produced in the county is not stored but is despatched from the farm for distribution immediately after being drawn from the cows. There are, however, hardly anywhere facilities for rapidly cooling the milk before distribution and the conditions under which milk is sold in some of the small shops is most

objectionable, *i.e.*, standing in an uncovered vessel surrounded by bacon, vinegar, paraffin, etc., exposed to clouds of manure laden dust from the street and contaminated by struggling flies fresh from the nearest midden.

Legislation is urgently required empowering the Local Government Board to enforce the adoption of regulations under the Dairies, Cowsheds and Milkshops Order and requiring every cowkeeper, dairyman or shopkeeper selling milk to have his premises *licensed* each year, the granting of such licence being conditional on the cowshed, dairy or milkshop being kept in a satisfactory condition and according to the regulations.

INFANT LIFE PROTECTION ACT, 1897.

It has for a long time been recognised that the provisions of the above Act require amendment and they have formed a subject of discussion at various congresses of the Royal Sanitary Institute as well as at conferences specially convened for the purpose of considering the persistently high infant mortality rate and the measures which should be adopted for its reduction.

Section 2 of the Act provides that "any person retaining or receiving for hire or reward more than one infant under the age of five years for the purpose of nursing or maintaining such infants apart from their parents for a longer period than forty-eight hours, shall within the said forty-eight hours give notice thereof to the local authority." Saving the case of persons retaining or receiving an infant under the age of two years on consideration of a sum of money not exceeding £20 paid down, and without any agreement for further payment as value for the care and bringing up of the said infant until it is re-claimed or of an age to provide for itself, one infant may be taken without any obligation resting upon the recipient to register, and therefore no provision is made for the protection of many children received for hire or reward by individuals who escape the regulations owing to one child only being received.

It is manifest that under the above regulations children may be received by most unsuitable persons and may be most inefficiently cared for, without the controlling authority receiving any information of such children having been put out to nurse.

In all cases in which a lump sum (not exceeding £20) is paid down and especially in the case of illegitimate children the absence of any obligation to register is especially to be deprecated as under the above circumstances it is actually to the advantage of the recipient that the child taken should not live.

A Bill to amend the Infant Life Protection Act has on four occasions been introduced into the House of Commons but owing to pressure of other business the Government were unable on each occasion to afford facilities for its discussion or to themselves introduce legislation on the subject.

It appears highly desirable that the Act should be amended in such a manner that any person receiving or retaining, for hire or reward, for a period of more than forty-eight hours, *one or more* infants under the age of five years should be controlled by the Act.

It is also felt that the period allowed for birth registration (forty-two days) is unsatisfactory and that every birth should be registered within twenty-one days. One of the advantages which would result from such an alteration in the Act is that, wherever health visitors are employed, they would become acquainted with the whereabouts of all children born at a very much earlier date than under the existing regulations, and that in the event of children put out to nurse being improperly cared for, the parents could be informed before irreparable injury to the child had been caused.

RIVERS POLLUTION PREVENTION ACT.

In consequence of a communication from the Police Committee of the River Tweed Commissioners calling attention to the polluted state of that river and of some of its tributaries, the county council adopted the recommendation of the Property and Sanitation Committee, that the council should concur in taking steps for the purification of the river.

No means having been taken to prevent the pollution of the Brierdean and Seaton burns by sewage from the Earsdon district and of the Seaton burn by sewage from Seghill and of the Seaton and Horton burns by sewage from Cramlington, the council sealed notices in May under the Rivers Pollution Prevention Acts for service on the Earsdon, Seghill and Cramlington Urban District Councils and in November the committee, under their delegated powers, directed proceedings to be taken under the aforesaid Acts against the district councils named. But on an assurance being received from the Earsdon and Seghill councils that they were at last beginning to take action in the required direction, their application for an adjournment was not opposed. The Cramlington Council having prepared a scheme and entered into a contract for its completion, proceedings against this council were temporarily postponed.

The following instances of water courses polluted by unpurified sewage were reported to the Property and Sanitation Committee.

Bedlingtonshire Urban District.—Pollution of the rivers Wansbeck and Blyth, also of the Sleekburn and Willowburn and of runners flowing into one or more of the above by sewage from this district.

Hexham Rural District.—Pollution of the river Tyne by sewage from West Wylam, Prudhoe, Mickley and Ovingham and of Poison burn by sewage from Acomb and also of a water course by sewage from Alledale.

Weetslade Urban District.—Pollution of Seaton burn by sewage from the above-named district.

Willington Quay Urban District.—Pollution of the Willington Dene burn by sewage from Willington West Farm.

Walker Urban District. (Included within the extended boundaries of the city of Newcastle in November, 1904).—Pollution of the Wallsend burn or its tributaries by sewage from Rosy Cottage.

The Borough of Wallsend.—Pollution of the Wallsend burn or its tributaries by sewage from the West Farm, Westmoreland Cottage Farm and the High Farm, Wallsend.

Tynemouth Rural District.—Pollution of the Brierdean burn by sewage from Brierdean Farm. Pollution of the Wallsend burn and its tributaries by sewage from White Cottage, Bigges Main, Benton Hall, Benton Park, Benton Park Farm, Wagonway Cottage, Mr. Dodd's Farm, East and West Villas, Little Benton, and Benton Place, Long Benton.

Rothbury.—Pollution of the Coquet by crude sewage from Rothbury. Up to the end of the year no land had been acquired for sewage disposal works and no application had been made to the Local Government Board for sanction to borrow money for carrying out a scheme of sewerage and sewage disposal.

Alnwick Urban District.—Pollution of the river Aln by sewage from Canongate, also the imperfectly purified sewage from the sewage disposal works for the high level sewers remained at the end of the year practically in the same condition as when reported in December, 1903. An Inquiry was held in September, 1905, by one of the Inspectors of the Local Government Board in consequence of an application by the district council for sanction to borrow money for purposes of sewerage and sewage disposal for the Canongate area.

Morpeth Rural District. (Hepscott).—Pollution of the Coal Burn and the Hepscott burn by crude sewage from the station and village of Hepscott and outlying farms and dwelling-houses. The conditions reported in 1904 remained practically unchanged up to the end of 1905. The same remark applies in nearly all cases to the instances of pollution of the river Lyne and its tributaries reported in November, 1904.

Hexham Rural District. (Half Way Houses).—Discharge of sewage in an untreated condition into a water course instead of passing through the sewage disposal works provided for the purpose.

Earsdon Urban District.—Foul effluent from the sewage farm, and numerous complaints of serious nuisance and injury to stock arising from the polluted condition of the Brierdean burn; also pollution of Seaton burn by imperfectly purified sewage from Holywell.

The Seghill and Cramlington Urban District Councils were approached by the Earsdon Urban District Council with a view of a combined sewerage scheme for the three districts being adopted, by which the sewage would be piped to the sea near Holywell Dene. The proposal came to nothing, the Cramlington and Seghill councils being of opinion that, if compelled to alter the existing conditions, they could each provide sewage disposal works more economically than by joining the combined scheme proposed by the Earsdon district council.

Beyond preparing plans for the proposed combined scheme and negotiating with the Cramlington and Seghill councils no steps were taken during the year by the Earsdon council to remedy the increasing nuisance caused by their sewage farm.

Ashington Urban District.—Pollution of Haydon lech and the river Lyne previously reported in 1894, 1897, 1900 and 1904. During 1905 an engineer was directed to prepare a sewage disposal scheme which was presented to the council before the end of the year.

BYE-LAWS.

The urban districts of Cramlington and Seghill were without bye-laws at the end of 1905.

BYE-LAWS CONFIRMED BY THE LOCAL GOVERNMENT BOARD DURING 1905.

Names of Authorities.	Subjects.
Borough of Morpeth...	Cattle Market : Fixing the days and the hours during each day on which the market shall be held. Regulating the use of the market place.
Bedlingtonshire Urban District Council	Common Lodging Houses : Fixing and from time to time varying the number of lodgers who may be received into a common lodging house and for the separation of the sexes therein ; and promoting cleanliness and ventilation in such houses ; and the giving of notices and the taking precautions in the case of any infectious disease ; and the well ordering of such houses generally.
Cowpen	New Streets and Buildings.
Gosforth Urban District Council	New Streets and Buildings.
Hexham Urban District Council	Pleasure Grounds.
Hexham Rural District Council	New Streets and Buildings.
Morpeth Rural District Council	Do. do.

LOANS.

Loans for sanitary and other public improvements applied for by the Northumberland County Council, and by the undermentioned boroughs, urban and rural district councils, were sanctioned by the Local Government Board during 1905.

Authority.	Purpose.	Period in years.	Amount.
NORTHUMBERLAND COUNTY COUNCIL ...	Reconstruction of Crooked Bridge	30 years	£ 547
	Do. Bridge Mill Bridge	30 „	472
	Widening Three Mile Bridge	30 „	1,171
	Alterations at Hexham Court House	20 „	530
	Do. Hexham Police Station	20 „	470
	County Council's proportion of cost of purchase of Scotswood Bridge and abolition of Roads' Tolls	50 „	1,815
	Improvements of main roads	20 „	9,527
	Erection of North Sunderland Council School	28 „	2,900
	Improvements at Scremerston Council School	18 „	320
	Do. Mickley do. ...	15 „	200
	Purchase of site for Whitley South Council School	30 „	1,911
	Erection of Shiremoor Council School	29 „	4,067
	Purchase of site for Choppington Guide Post Council School	29 „	650
	Erection of Choppington Guide Post Council School	29 „	2,570
	Improvements at Nedderton Infants' Council School	10 „	429
	Do. Mickley do. ...	18 „	200
	Purchase of Woodhorn New Hirst Colliery School	25 „	14,750
COUNCILS OF BOROUGHES—			
Berwick ...	Elementary Education..	60 „	1,200
	Do. do. ...	30 „	3,887
Morpeth ...	Street improvements ...	18 „	200
	Sewage works ...	30 „	600
Wallsend ...	Provision of horses	7 „	1,200
	Carts and harness		
	Private street improvement	7 „	249
	Provision of a public elementary school	30 „	15,502
	Do. do. ...	10 „	1,000
	Purchase of land for the purposes of a public elementary school	60 „	170

Authority.	Purpose.	Period in years.	Amount.
URBAN DISTRICT COUNCILS			£
Blyth	Pleasure ground ...	20 years	400
Cowpen	Water supply	30 „	800
	Stables, etc.	27 „	650
Gosforth	Steam fire engine, &c. ...	10 „	450
	Newcastle Boundaries' extension costs	5 „	1,000
Newburn	Street improvement ...	30 „	3,300
	Private street improvement	5 „	660
	Do. do.	5 „	138
	Provision of a cemetery at Lemington	30 „	350
Whitley and Monk-seaton	Public street improvements	60 „	400
	Private improvements...	5 „	3,618
	Public slaughter houses	21 „	4,500
	Private street improvements	5 „	1,182
RURAL DISTRICT COUNCILS.			
Glendale	Slaughter houses (Wooler)	30 „	310
Tynemouth	Private improvements...	5 „	3,094
	Do. do.	4 „	620
	Do. lighting	9 „	138

LOCAL GOVERNMENT BOARD INQUIRIES.

The following inquiries were held, during the year, by Inspectors of the Local Government Board:—

Date of inquiry.	Authority applying for inquiry.	Locality on account of which application is made.	Subject matter of inquiry.
Mar. 7th, 1905	Haltwhistle Rural District Council	Township of Melkridge	Application for loan of £300 for purposes of water supply and of sewerage and sewage disposal
Mar. 28th, „	Bedlingtonshire Urban District Council	Bedlingtonshire Urban District	Application for loan of £3,570 for works of sewerage
Sept. 18th, „	Alnwick Urban District Council	Canongate area of the Alnwick Urban District	Application for loan of £6,850 for purposes of sewerage and sewage disposal

INQUIRIES HELD BY COMMITTEES OF THE COUNTY COUNCIL.

Date of Inquiry.	Subject matter of inquiry.
November 21st, 1905 ...	The proposal for the union of the Urban Districts of Blyth and Cowpen
December 5th, 1905 ...	The proposal for the increase of the number of the members of the county council by giving additional representation on the same council to the Parish of Mason in the Rural District of Castle Ward

HOUSING OF THE WORKING CLASSES AND OVERCROWDING.

In only eight of the annual reports from district medical officers of health was any reference made to the sufficiency or otherwise of house accommodation for the weekly wage class, and in seven only was any reference made to overcrowding.

In many of the annual and monthly reports issued by the county medical officer reference has been made to overcrowding in rural as well as in urban districts and it will be remembered that, in consequence of the amount of overcrowding, etc., which was reported to exist in several localities and the amount of disease which was felt to be caused by these conditions, the council in August, 1904, instructed the Property and Sanitation Committee to present a report upon "Overcrowding and consequent insanitary dwellings in the county."

The work of inspection and enquiry in the various sanitary districts was commenced in October, 1904, and in November, 1905, the committee presented their report to the council.

The report dealt with:—

- (1) Overcrowding of houses on land.
- (2) Obstructive buildings.
- (3) Overcrowding in houses by inmates.
- (4) Different kinds of insanitary dwellings consequent upon overcrowding.
- (5) Evil results of overcrowding.

A statistical table was appended showing the general and zymotic death rates and the infant mortality rate for all the sanitary districts in which the above-mentioned rates exceeded those obtaining for England and Wales.

A copy of the committee's report was sent to every member of the council and several copies to the clerks of all borough, urban and district councils; it will therefore suffice to state here that the report showed the existence of a considerable amount of overcrowding of one kind or another in thirteen urban and in six rural districts, also that in many instances houses were occupied which were unfit for human habitation.

WATER SUPPLIES.

Under the Newcastle and Gateshead Water Act, 1904, the following districts were included within the Company's area of supply:—The urban districts of Blyth, Cowpen, Earsdon and Seghill, and the townships or parishes of Burradon, Berwick Hill, Brentley, Darras Hall, Dinnington, High Callerton, Horton Grange, Little Callerton, Mason, Ponteland, Prestwick (including Prestwick Carr), Stannington (part of, *i.e.*, south of the railway bridge), Heddon-on-the-wall (part of, *i.e.*, south of the Newcastle and Carlisle main road), Broomley (part of north eastern portion, *i.e.*, Stocksfield, Ridley Mill, Old Ridley and Painshawfield), and during the year agreements were entered into between the Newcastle and Gateshead Water Company and the under-mentioned urban districts:—Earsdon, Seghill and Blyth. The Company also extended their mains in the Hexham rural district so as to supply Alexandra and Branchend Terraces and the Painshawfield estate, and schemes were also prepared and considered for supplying Haltwhistle, Mickley and Edgewell Houses.

Considerable progress was made in the water scheme being carried out by the county borough of Tynemouth, and the Whitley and Monk-seaton urban district received a much more abundant supply from Font-burn though the peaty water was not sufficiently decolorized.

In the Castle Ward rural district, Dinnington village was supplied by the Newcastle and Gateshead Water Company.

In the Haltwhistle rural district various schemes were considered for improving the supplies to portions of the Haltwhistle, the Melkridge and Henshaw, and the Blenkinsopp & Thirlwall sub-districts.

In rural districts the water supplies for a great many houses or collections of houses continued to be most unsatisfactory, the undesirable conditions being for the most part owing to either the water for domestic purposes being derived from shallow surface wells liable to gross pollution from cattle and from manured land, or to the water being at a considerable distance from the houses to be supplied, or to both conditions being present. Under the circumstances first mentioned impure water is used from time to time for dietetic purposes; under the second an inadequate amount is used for maintaining a sanitary condition of houses and their surroundings.

The difficulty in compelling an adequate supply of water to groups of houses has always been dependent upon the provisions of the Public Health (Water) Act, 1878, Section 3 (5) it being held that a supply of water for a *group* of houses cannot be enforced unless one of the houses, singly, can be supplied at a cost not exceeding £8 13s. 6d., or with the consent of the Local Government Board for a sum not exceeding £13.

Many instances occur of, say, ten houses being without an adequate supply of pure water within a reasonable distance and of the impossibility of bringing a supply to a *single* house for either of the sums above mentioned, but a supply could be brought to the *ten* houses for ten times £8 13s. 6d. (or with the sanction of the Local Government Board for ten times £13).

During the year the council received a copy of the following resolutions passed by the Salop County Council.

(Copy resolution referred to.)

(1) That it is desirable that Section 3 (5) of the Public Health (Water) Act 1878 should be amended so as to enable a rural sanitary authority to enforce a joint supply of water to rows or groups of houses, wherever the proportionate cost for each house can be brought within that prescribed by Section 3 of the above Act.

(2) That a copy of the above resolution be forwarded to the Local Government Board, and that they be urged to secure an early amendment of the law.

The Northumberland County Council at the May meeting passed a similar resolution to the above.

SEWERAGE AND SEWAGE DISPOSAL.

Sewerage schemes were prepared and considered for Ovingham and Wylam (north side) but, at the place last mentioned, owing to the difficulty experienced in obtaining site for the disposal works, no further progress was made.

Schemes were also considered for Haltwhistle and Stocksfield but no steps were taken either at these places or at Wylam (south side) for remedying the conditions previously reported.

Sewerage schemes were completed for West Wylam, Mickley and Mickley Square. Sewage disposal works for Prudhoe Castle, Prudhoe, Low Prudhoe and West Wylam were commenced, and for Farnley, Eltringham and Haydon Bridge (north side) were completed during the year.

SCAVENGING.

The systems under which this work was carried out were for the most part as described in former annual reports, *i.e.*, in urban districts the work was generally carried out by the district council, though in some instances it was let to contractors; in colliery districts scavenging was frequently, as before, performed by the different coal companies and in rural districts the work was generally let to contractors, or carried out by neighbouring farmers at long and irregular intervals, that is to say, whenever it interfered least with farming operations.

The unsatisfactory results of letting this work to contractors or of leaving it to the convenience of neighbouring farmers have been alluded to in several of my previous annual reports and I have also indicated on previous occasions that scavenging by contractors is in many instances carried out in a most irregular manner; the contractor enters into agreements for other work and while his men and horses are carrying out these undertakings scavenging is scamped or altogether neglected. I have on previous occasions indicated that scavenging can be carried out more regularly, more thoroughly and *more economically* by the sanitary authority than by contractors, the latter being largely dependent upon their profits from this work for their livelihood, and the truth of this statement has been proved in more than one instance when the experiment has been fairly tried and strict accounts have been kept.

DISINFECTION.

Some improvement was effected during the year both in the methods adopted for, and in the thoroughness of, disinfection; several sanitary authorities provided their sanitary inspectors with lamps or sprays or both, and in some districts the disinfection of rooms after being occupied by a Phthisical patient was carried out by the sanitary authority. One additional steam disinfector was provided, *viz.*, at the new isolation hospital in the urban district of Bedlingtonshire.

It is much to be regretted that so few steam disinfectors are provided, especially in the case of two Port Sanitary Authorities. The excuse usually given is that it is cheaper to give compensation for bedding and clothing destroyed than to provide means for efficient disinfection. This may possibly in some instances be the case, but the fact remains that when no facilities are provided for thorough disinfection, many infected articles are not destroyed, whereas, if a steam disinfector is available, every article which can possibly have become infected and which would be injured by boiling, is efficiently disinfected. When no steam disinfector is provided efficiency is frequently sacrificed to cheapness.

ISOLATION HOSPITALS.

The following sanitary districts had isolation hospital accommodation:—

Boroughs.—Berwick-on-Tweed, Morpeth and Wallsend.

Urban Districts.—Alnwick, Amble, Ashington, Bedlingtonshire, Blyth, Cowpen, Cramlington, Earsdon, Gosforth, Hexham, Newbiggin-by-the-Sea, Newburn, Rothbury, Seghill, Whitley and Monkseaton and Willington Quay.

Rural Districts.—Belford, Castle Ward, Glendale, Hexham, Morpeth, Norham and Islandshire, Rothbury, Tynemouth No. 1 and Tynemouth No. 2.

The amount of hospital accommodation available for infectious disease was as shown in subjoined table:—

	Popula- tion served.	Number and kind of hospitals provided.	Diseases to be treated.	No. of beds provided.
JOINT HOSPITAL DISTRICTS.				
<i>Earsdon Joint Hospital Dis- trict serving</i>				
The urban district of Earsdon ...	47,593	Two, both iron and wood buildings :—		
Do. do. Seghill ...				
Do. do. Whitley and Monkseaton		One at Scaffold Hill ...	Small-pox ...	20
The rural district of Tynemouth		Do. at Earsdon Grange	Infectious dis- eases other than Small- pox	24
<i>Gosforth, Newburn, and Castle Ward Joint Hospital District serving</i>				
The urban district of Gosforth ...	28,525	One permanent building	do. ...	32
Do. do. Newburn ...				
Part of the rural district of Castle Ward				
<i>Wallsend and Willington Quay Joint Hospital serving—</i>				
The borough of Wallsend ...	32,082	Do. ...	do. ...	30
The urban district of Willington Quay				
HOSPITALS PROVIDED BY INDIVIDUAL SANITARY AUTHORITIES.				
Borough of Berwick-on-Tweed ...	13,420	{ One temporary hospital	do. ...	8
Do. Morpeth	6,437	{ Wooden huts ...	Small-pox ...	8
		Permanent building ...	Small-pox or other infec- tious diseases	22
Do. Wallsend	23,868	Iron and wood building	Small-pox ...	16
Urban district of Alnwick ...	6,800	One permanent building	Infectious dis- eases other than Small- pox	8
Do. do. Amble	5,000	Permanent building ...	Small-pox ...	4
Do. do. Ashington ...	18,300	{ One iron building ...	do. ...	10
		Do. ...	Infectious dis- eases other than Small- pox	24
Do. do. Bedlingtonshire	22,500	{ One permanent hospital	Small-pox ...	20
		{ Iron and wood building	Infectious dis- eases other than Small- pox	10
Do. do. Cramlington ...	6,680	One iron and wood build- ing	Small-pox or other infec- tious diseases	12
Do. do. Gosforth	12,000	Do. ...	Small-pox ...	8
Do. do. Hexham	8,000	Two iron and wood buildings	1 for do. ...	20
			1 for Infectious diseases other than Small- pox	

			Popula- tion served.	Number and kind of hospitals provided.	Diseases to be treated.	No. of beds provided.
HOSPITALS PROVIDED BY INDIVIDUAL SANITARY AUTHORITIES— <i>continued.</i>						
Urban district of Newbiggin-by-the-Sea ...			2,530	One wooden hospital ...	Small-pox ...	4
Do.	do.	Newburn ...	14,312	One iron and wood hospital	do. ...	4
Do.	do.	Rothbury ...	} 6,185	Do. ...	do. ...	12
Rural	do.	do. ...		Do. ...	do. ...	12
Urban	do.	Willington Quay ...	8,214	Do. ...	do. ...	12
Rural	do.	Belford ...	5,235	Do. ...	do. ...	8
Do.	do.	Castle Ward ...	10,798	Wooden hospital ...	do. ...	12
Do.	do.	Glendale ...	8,770	Two cottages ...	do. ...	8
Do.	do.	Hexham ...	27,882	{ One iron and wood hospital	do. ...	12
				Do. ...	Infectious diseases other than Small-pox	8
Do.	do.	Morpeth ...	17,000	Do. ...	Small-pox ..	12
Do.	do.	Norham and Islandshire ...	6,054	Do. ...	do. ...	10
RiverTynePort Sanitary Authority				Floating hospital ...		
Do. Blyth	do.	do. ...		Permanent building ...	Small-pox or other infectious diseases	24
SANITARY AUTHORITIES HAVING NO HOSPITAL OF THEIR OWN BUT HAVING MADE ARRANGEMENTS FOR PATIENTS TO BE RECEIVED BY NEIGHBOURING SANITARY AUTHORITIES:—						
Urban district of Blyth ...			6,271	Patients from this district are received into the hospital of the Blyth Port Sanitary Authority		
Do.	Cowpen ...		19,170		Do.	
SANITARY AUTHORITIES WITHOUT ANY HOSPITAL FOR INFECTIOUS DISEASES AND WITH NO ARRANGEMENTS WITH NEIGHBOURING SANITARY AUTHORITIES:—						
Urban district of Weetslade ...			5,453			
Rural	do.	Haltwhistle ...	8,900			
Do.	do.	Bellingham ...	6,000			
Do.	do.	Alnwick ...	12,644			
SANITARY AUTHORITIES WHO ARE TAKING STEPS TOWARDS PROVIDING ISOLATION HOSPITAL ACCOMMODATION:—						
Alnwick urban district ...			}	One joint hospital for the two districts ...	do. ...	
Do.	rural	do. ...				
Wallsend (borough of) ...			}	Do. ...	do. ...	
Willington Quay (urban district)						

The number of cases treated in these institutions during the year was 184, distributed as follows:—*Boroughs*—Berwick-on-Tweed, 1; Wallsend, 42. *Urban Districts*—Alnwick, 1; Ashington, 40; Bedlingtonshire, 3; Blyth, 5; Cowpen, 3; Earsdon, 12; Newburn, 27; Whitley and Monkseaton, 1; Willington Quay, 45. *Rural Districts*—Hexham, 7; Tynemouth No. 1, 1; Tynemouth No. 2, 11.

The population of the 28 sanitary districts possessing isolation hospitals, or having made arrangements for the use of isolation hospitals provided in neighbouring districts was 301,019, and the number of beds was 402, giving an average of one bed for every 748 persons. The population of the four sanitary districts (the urban district of Weet-slade and the rural districts of Alnwick, Bellingham and Haltwhistle) having made no arrangements for the isolation of infectious diseases was 32,997.

BACTERIOLOGICAL INVESTIGATIONS.

The number of specimens sent for examination during the year was 289, compared with 153 in 1904. The number of districts sending specimens was 27.

Months.	Phthisis.			Enteric Fever.			Diphtheria.			Total Specimens Examined.		
	Specimens Examined.	Positive.	Negative.	Specimens Examined.	Positive.	Negative.	Specimens Examined.	Positive.	Negative.	Positive.	Negative.	Total.
January	11	4	7	5	3	2	11	6	5	13	14	27
February	5	1	4	—	—	—	5	2	3	3	7	10
March ...	15	5	10	8	5	3	8	4	4	14	17	31
April ...	7	3	4	1	—	1	7	2	5	5	10	15
May ...	10	3	7	6	5	1	8	3	5	11	13	24
June ...	7	1	6	4	1	3	3	2	1	4	10	14
July ...	7	3	4	2	1	1	3	2	1	6	6	12
August ...	7	2	5	3	2	1	7	2	5	6	11	17
September	7	3	4	10	6	4	41	22	19	31	27	58
October ...	5	4	1	2	—	2	10	4	6	8	9	17
November	14	7	7	6	1	5	11	5	6	13	18	31
December	18	6	12	3	2	1	12	3	9	11	22	33
Totals ...	113	42	71	50	26	24	126	57	69	125	164	289

It is satisfactory to note from the above table that advantage was taken to a very much greater extent of the facilities provided by the council for bacteriological examinations of specimens taken from subjects of suspected infectious disease; it is, however, regrettable that of the thirty-four sanitary districts which were embraced in the administrative county up to December 31st, 1905, no use whatever was made of the above-named facilities in seven districts.

In one serious outbreak of Diphtheria the Medical Officer of the Hexham rural district was greatly assisted by the above-named facilities made by the county council, in tracing to its source the origin of the outbreak and quickly preventing any further spread in a portion of the district in which many insanitary conditions were in evidence.

PHTHISIS.

The connection which exists between Phthisis and overcrowding and other insanitary conditions of dwelling houses, workshops and cowsheds, is well-known to sanitarians and to some extent admitted even by the general public.

During the year the Property and Sanitation Committee presented a report dealing with Overcrowding and Insanitary Dwellings consequent upon overcrowding. The report indicated some of the evils resulting from overcrowding of houses on area, from obstructive buildings and from overcrowding of houses by inmates.

The treatment of suitable cases of Phthisis in sanatoria is no longer in the experimental stage, experience extending over several years having demonstrated the fact that patients suffering from Phthisis in its early stage are so benefited by sanatoria treatment (the essentials of which are abundance of pure air, night and day, the greatest amount of sunshine which can be obtained, also rest, nourishing food and freedom from dust, smoke and fog) as in the great majority of cases to have been able to resume their former employment, or more suitable work if it could be obtained, and to have continued at work now for some years.

Considerable progress was made during the year with the Sanatorium at Barrasford which, when completed, will provide accommodation for fifty patients and the necessary staff. The administrative block, the laundry, the plant for heating, lighting and drainage and also the water supply have all been made to meet the requirements of one hundred patients, so that rooms for fifty additional patients can be added, when the necessary funds are available, at comparatively small cost. The Sanatorium above-named is the only institution of its kind for either the county of Northumberland or the city of Newcastle-on-Tyne.

SMALL-POX.

In the month of July a Conference was held at the Mansion House, London, under the presidency of the Lord Mayor, to consider the best methods to be adopted for the prevention of epidemic Small-pox.

The Conference was largely attended by representatives of Metropolitan and other Boroughs, County, City and Urban and Rural District Councils, Lord Mayors and Mayors, Lord Provosts and Provosts, etc., etc., from England, Scotland and Wales, as well as by leading members of the medical profession. A considerable amount of evidence was brought forward bearing upon the enormous expense caused by epidemics of Small-pox, the cost of providing Small-pox hospitals and the manner in which Small-pox had been practically banished in Germany by compulsory vaccination during infancy and again at 12 years of age.

The following resolutions were carried unanimously.

Proposed by the Lord Mayor of York and seconded by Sir William Broadbent:—"That the continued recurrence of epidemic Small-pox involves much needless suffering, interference with trade, waste of public money, and increase of municipal expenditure." He said that from a financial standpoint it was a good business speculation for the citizens of a community to undertake vaccination, for the expense of an outbreak of Small-pox was extremely heavy.

Proposed by Sir W. Church and seconded by Alderman Kilburn:—"That epidemic Small-pox ought to be prevented in this country, as it has been since 1875 in Germany, by the systematic re-vaccination of children in their thirteenth year; and added that since 1893 the mortality in Germany from Small-pox had never exceeded one per million living, and in all except, he thought, one year since 1893 had been only a fractional part of one per million, that the few cases of

Small-pox which had occurred in Germany had been principally among foreigners in the seaports, and that our death rate average from Small-pox, calculated over several years, is ten times greater than it need be.

Proposed by His Grace the Duke of Northumberland, and supported by the Mayors of Preston and Birkenhead, also by Dr. Brudenell Carter and Dr. H. Armstrong:—"That this meeting of Lord Mayors and Mayors, Lord Provosts and Provosts, and Chairmen of the Urban and Rural District Councils of such towns and localities in Great Britain and Ireland as have suffered collectively from upwards of 480 separate epidemics of Small-pox in the last 18 months, ventures to urge upon His Majesty's Government the great importance of preventing the recurrence of such epidemics by the systematic re-vaccination at school age of all but the children relieved under the exemption clause, and for those who are for a time excused on the ground of health."

SMALL-POX AND VAGRANCY.

During the year no legal powers were obtained for detaining in common lodging houses, etc., persons having been in contact with a patient suffering from Small-pox and suspected of being in an infectious condition, but the Chairman of the Property and Sanitation Committee together with representatives from other public bodies were received by the President of the Local Government Board for the purpose of discussing the spread of infectious diseases by vagrants and the necessity for legislation to restrict the indiscriminate wanderings of persons who are suspected of being in an infectious condition.

I have again to thank the district medical officers of health, the surveyors and sanitary inspectors, for much valuable assistance given me on many occasions.

I am, gentlemen,

Your obedient servant,

J. W. HEMBROUGH.

THE COUNTY AS A WHOLE.

AREA.

The area of the County is 1,278,600 acres, divided as follows:—Boroughs, 7,882 acres; urban districts, 46,775 acres; rural districts, 1,223,943 acres.

POPULATION.

The population of Northumberland (exclusive of Newcastle-on-Tyne), estimated to the middle of 1905, is 334,016, being a decrease of 53,775 on the 1901 census, a decrease of 82,417 as compared with the population estimated to the middle of 1904, and an increase of 6,621 on the population in November, 1904, after the loss to the county of the Borough of Tynemouth and of the urban districts of Benwell and Fenham and Walker, and part of the parish of Kenton.

The greatest estimated increase in population since 1904 was in the Borough of Wallsend (1,368).

BOROUGHs, URBAN AND RURAL DISTRICTS.

The County up to the end of 1905 was divided for the purpose of sanitary administration into 32 districts, three of which were boroughs, seventeen urban districts, and twelve rural districts. There are also the Tweed, Tyne, and Blyth Port Sanitary Authorities.

BOROUGHs.

Berwick-on-Tweed, Morpeth, and Wallsend.

The population of the boroughs was estimated to be 43,725 in the middle of 1905.

URBAN DISTRICTS.

Alnwick, Amble, Ashington, Bedlingtonshire, Blyth, Cowpen, Cramlington, Earsdon, Gosforth, Hexham, Newbiggin-by-the-Sea, Newburn, Rothbury, Seghill, Weetslade, Whitley and Monkseaton, and Willington Quay.

The population of the urban districts (estimated to the middle of 1905) was 158,310.

RURAL DISTRICTS.

Alnwick, Belford, Bellingham, Castle Ward, Glendale, Haltwhistle, Hexham, Morpeth, Norham and Islandshire, Rothbury, Tynemouth No. 1 and Tynemouth No. 2.

The population of the rural districts (estimated to the middle of 1905) was 131,981.

DENSITY OF POPULATION.

The average number of persons per acre was, for the county 0·26, for the boroughs and urban districts 3·69, and for the rural districts 0·10.

This, however, was subject to great variation; thus in the urban district of Willington Quay the average population to the acre was 26·24, while in the urban district of Rothbury it was only 1·37. In the rural districts the highest average per acre was in Tynemouth No. 2 (1·87), and the lowest in Bellingham (0·024).

The area and population of each sanitary district in the Administrative County will be found in a table at the end of this report.

BIRTHS.

The births registered during 1905 numbered 10,159, giving a birth rate for the county of 30·41. In 1904 the rate was 29·42.

Of the 10,159 births 6,645 occurred in the boroughs and urban districts, and 3,514 in the rural districts. The birth rate for the former was 32·89 per 1,000 (30·89 in 1904), and for the latter 26·62 (26·21 in 1904).

The following table shows the comparative rates:—

	Birth Rate.	Increase since 1904.	Decrease since 1904.
Administrative County ...	30·41	0·99	—
Urban districts ...	32·89	2·00	—
Rural districts ...	26·62	0·41	—
England and Wales ...	27·2	—	0·7

The three highest birth rates per 1,000 living were recorded in the following districts:—

Urban Districts.	Birth Rate.	Rural Districts.	Birth Rate.
Weetslade ...	41·07	Tynemouth No. 2 ...	34·38
Ashington ...	39·28	Tynemouth No. 1 ...	30·49
Wallsend, borough of ...	38·67	Morpeth	29·23

while the three lowest were returned from the districts in the under-mentioned table:—

Urban Districts.	Birth Rate.	Rural Districts.	Birth Rate.
Whitley and Monkseaton...	19·0	Belford ...	20·43
Rothbury ...	21·05	Glendale ...	20·98
Berwick-on-Tweed, borough of	25·55	Bellingham ...	22·83

During the year under consideration the birth rate showed an increase in 8 urban and in 8 rural districts; in 12 urban and 4 rural districts the rate showed a decrease. In 14 urban and 3 rural districts the birth rate exceeded, and in 6 urban and 9 rural districts was below, the rate for England and Wales.

The following table shows the birth rates during the last ten years:—

Year.	Number of births per 1,000 living during the years 1896-1905.			
	Administrative County.	Urban Districts.	Rural Districts.	England and Wales.
1896 ...	31·75	34·62	27·07	29·7
1897 ...	31·57	34·34	26·45	29·7
1898 ...	30·88	33·86	25·23	29·4
1899 ...	31·46	34·31	25·99	29·3
1900 ...	31·24	34·03	25·56	28·9
1901 ...	33·22	36·29	26·73	28·5
1902 ...	32·76	35·45	27·04	28·6
1903 ...	32·58	35·52	26·27	28·4
1904 ...	29·42	30·89	26·21	27·9
1905 ...	30·41	32·89	26·62	27·2

DEATHS.

The number of deaths registered during 1905 was 5,016. Of these 3,167 occurred in urban, and 1,849 in rural districts.

The county rate was 15·01, as compared with 17·12 in 1904 and 16·81 in 1903; that of the urban districts was 15·67, as compared with 17·6 in 1904, and 17·54 in 1903; the rural death rate was 14·0, as against 15·99 in 1904, and 15·24 in 1903.

The death rate for England and Wales was 15·2, as against 16·2 in the previous year.

The approximate urban death rate for England and Wales was 15·1, and the approximate rural death rate 14·9.

The following table shows the comparative rates :—

	Death Rate.	Increase since 1904.	Decrease since 1904.
Administrative County ...	15·01	—	2·11
Urban districts ...	15·67	—	1·93
Rural districts ...	14·00	—	1·99
England and Wales ...	15·20	—	1·00

The three highest death rates per 1,000 living in each class of district were found to be as follows :—

Urban Districts.	Death Rate.	Rural Districts.	Death Rate.
Cramlington ...	20·35	Morpeth ...	14·7
Willington Quay ...	18·38	Alnwick ...	14·47
Newburn ...	17·67	Tynemouth No. 2 ...	14·21

while the three lowest were recorded as under :—

Urban Districts.	Death Rate.	Rural Districts.	Death Rate.
Whitley and Monkseaton...	9·08	Norham and Islandshire ...	10·40
Amble ...	11·20	Castle Ward ...	11·39
Blyth ...	12·43	Haltwhistle ...	11·91

During the year under consideration the death rate showed an increase in 4 boroughs and urban districts, and in 2 rural districts; in 16 boroughs and urban districts, and in 9 rural districts the rate showed a decrease. In 10 urban districts the death rate exceeded, and in 10 urban and in all the rural districts was below, the rate for England and Wales.

The following table shows the death rates for the last 10 years.

Year.	Number of deaths per 1,000 living during the years 1896-1905.			
	Administrative County.	Urban Districts.	Rural Districts.	England and Wales.
1896...	15·87	17·04	13·96	17·1
1897...	16·73	17·77	14·80	17·4
1898...	17·44	18·68	15·07	17·6
1899...	17·71	19·30	14·65	18·3
1900...	17·53	18·69	15·16	18·3
1901...	18·72	19·82	16·39	16·9
1902...	16·63	17·32	15·17	16·3
1903...	16·81	17·54	15·24	15·4
1904...	17·12	17·60	15·99	16·2
1905...	15·01	15·67	14·00	15·2

INFANT MORTALITY (UNDER ONE YEAR).

The number of deaths of children under 1 year was, in the boroughs and urban districts 964; in the rural districts 393; total 1,357.

The following table shows the comparative rates of infant mortality (deaths under 1 year per 1,000 births) :—

	Number of Deaths.	Death rate per 1,000 births.	Increase since 1904.	Decrease since 1904.
Administrative County ...	1,357	133.57	—	35.12
Urban districts ...	964	145.06	—	34.11
Rural districts ...	393	111.83	—	29.90
England and Wales ...	119,293	128.00	—	18.00

In 6 of the urban districts the infant mortality rate was higher, and in 14 lower, than in 1904.

In 4 of the rural districts the infant mortality rate was higher, and in 8 lower, than in 1904.

The three highest infant mortality rates per 1,000 births were recorded in the following districts :—

Urban Districts.	Infant Mortality Rate (per 1000 births.)	Rural Districts.	Infant Mortality Rate (per 1000 births.)
Cramlington ...	199.0	Tynemouth No. 1 ...	175.71
Newburn... ..	191.25	Tynemouth No. 2 ...	149.89
Earsdon	181.28	Morpeth	140.84

while the three lowest were returned from :—

Urban Districts.	Infant Mortality Rate (per 1000 births.)	Rural Districts.	Infant Mortality Rate (per 1000 births.)
Whitley and Monkseaton	78.94	Norham and Islandshire..	28.16
Alnwick	81.52	Rothbury	35.08
Rothbury	107.14	Bellingham	51.09

DEATHS UNDER 5 YEARS.

The deaths under 5 years numbered 1,890, giving a death rate at this age period of 5.65 per 1,000 living, as compared with 6.94 in 1904 and 6.6 in 1903.

The following tables show the numbers and death rates for the three years 1903-1905 inclusive :—

1903.					
Urban.	Rural.	Total.	Death Rate.	Death Rate Increase since 1902.	Death Rate Decrease since 1902.
2,120	560	2,680	6.6	0.62	—

1904.

Urban.	Rural.	Total.	Death Rate.	Death Rate Increase since 1903.	Death Rate Decrease since 1903.
2,204	689	2,893	6.94	0.34	—

1905.

Urban.	Rural.	Total.	Death Rate.	Death Rate Increase since 1904.	Death Rate Decrease since 1904.
1,344	546	1,890	5.65	—	1.29

DEATHS AT 65 YEARS AND UPWARDS.

The number of deaths at this age period was 1,191, giving a death rate of 3.56 per 1,000 living.

Of these 626 took place in the urban, and 565 in the rural districts.

The following tables show the number of deaths and death rates for the three years 1903-1905 inclusive:—

1903.

Urban.	Rural.	Total.	Death Rate.	Death Rate Increase since 1902.	Death Rate Decrease since 1902.
818	540	1,358	3.34	—	0.2

1904.

Urban.	Rural.	Total.	Death Rate.	Death Rate Increase since 1903.	Death Rate Decrease since 1903.
891	557	1,448	3.47	0.13	—

1905.

Urban.	Rural.	Total.	Death Rate.	Death Rate Increase since 1904.	Death Rate Decrease since 1904.
626	565	1,191	3.56	0.09	—

ZYMOTIC DISEASES.

The zymotic diseases which are generally notifiable are Small-pox, Scarlatina, Diphtheria, and Fevers (Typhus, Enteric, Continued, and Relapsing). The seven principal zymotic diseases, upon which the zymotic death rate is calculated, are the four just mentioned, and in addition Measles, Whooping Cough and Diarrhoea.

Four hundred and thirteen deaths were caused by the seven principal zymotic diseases, being a decrease of 413 compared with the number registered in 1904. Of these deaths 291 took place in the urban, and 122 in the rural districts.

The three zymotic diseases which caused the greatest mortality were :—

Diseases.	Numbers in 1904.	Numbers in 1905.
Diarrhoea	284	162
Measles	107	85
Diphtheria and Membranous Croup	50	56

As Diarrhoea, Whooping cough and Measles are not generally notifiable, I am unable to give any information as to the number of cases which occurred.

The following table shows the districts, urban and rural, in which the zymotic death rate was highest :—

Urban.	Death Rate.	Rural.	Death Rate.
Newburn	4·26	Tynemouth No. 2 ...	1·84
Cowpen	2·39	Tynemouth No. 1 ...	1·65
Cramlington	1·94	Morpeth	1·58

While the lowest death rates from zymotic disease are shown in the next table :—

Urban.	Death Rate.	Rural.	Death Rate.
Rothbury	Nil.	Norham and Islandshire...	0·16
Berwick-on-Tweed	0·36	Glendale	0·22
Wetslade	0·36	Bellingham	0·33

The comparative rates are set out in the following table :—

	Death Rate.	Increase since 1904.	Decrease since 1904.
Administrative County	1·26	—	0·73
Urban districts	1·44	—	0·54
Rural districts	0·94	—	1·06
England and Wales	1·52	—	0·42

During the year under consideration the zymotic death rate showed an increase in 2 urban and 3 rural districts; in 18 urban and 9 rural districts the rate showed a decrease.

Table showing death rates per 1,000 from each of the 7 principal zymotic diseases for the 3 years ending 31st December, 1905 :—

Diseases.	1903.	1904.	1905.	Increase. since 1904.	Decrease. since 1904.
Smallpox	0·04	0·06	0·01	—	0·05
Scarlatina	0·31	0·20	0·10	—	0·10
Diphtheria	0·21	0·12	0·16	0·04	—
Fevers	0·12	0·08	0·09	0·01	—
Measles	0·15	0·25	0·25	—	—
Whooping Cough	0·18	0·59	0·11	—	0·48
Diarrhoea	0·53	0·68	0·48	—	0·20

Cases of zymotic diseases notified from each district :—

1 District.	2 Number of cases notified.	3 Number of per- sons per 1000, attacked by zymotic diseases notified.*	4 Mortality rate per 1000 from zymotic diseases notified or ascertained.	5 Increase since 1904.	6 Decrease since 1904.
URBAN.					
Alnwick	4	0·58	0·88	—	0·31
Amble	26	5·2	0·60	—	1·54
Ashington	148	8·07	1·14	—	0·62
Bedlingtonshire ...	162	7·91	1·36	—	1·39
Berwick-on-Tweed, boro' of	51	3·80	0·37	—	0·52
Blyth	48	7·65	1·59	—	0·54
Cowpen	103	5·3	2·39	—	0·27
Cramlington	33	4·94	1·94	—	0·77
Earsdon	29	3·04	1·67	—	1·30
Gosforth	85	7·08	1·16	—	1·02
Hexham	19	2·37	0·75	—	1·62
Morpeth, boro' of ...	5	0·77	1·24	—	2·75
Newbiggin-by-the-Sea ...	37	14·6	1·18	—	0·04
Newburn	76	5·3	4·26	1·81	—
Rothbury	1	0·75	Nil.	—	0·75
Seghill	4	1·8	0·45	—	0·45
Wallsend, boro' of ...	95	3·9	1·17	—	1·05
Weetslade	33	6·05	0·36	—	0·55
Whitley & Monkseaton.	46	3·83	0·41	—	0·43
Willington Quay ...	65	1·91	1·82	1·09	—
RURAL.					
Alnwick	66	5·2	0·63	—	1·35
Belford	16	3·05	1·14	0·38	—
Bellingham	18	3·0	0·33	0·33	—
Castle Ward	73	6·7	1·01	—	0·70
Glendale	15	1·71	0·22	0·11	—
Haltwhistle	79	8·8	0·67	—	1·26
Hexham	191	6·85	0·57	—	1·94
Morpeth	126	7·4	1·58	—	2·35
Norham & Islandshire ...	32	5·2	0·16	—	0·33
Rothbury	29	5·97	0·20	—	0·42
Tynemouth No. 1 ...	101	9·8	1·65	—	0·62
Tynemouth No. 2 ...	117	8·6	1·84	—	0·87

* Exclusive of Measles, Whooping cough, and Diarrhœa, the attack rate for which cannot be ascertained, owing to those diseases not being generally notified.

CHOLERA.

No cases of Cholera occurred during the year.

PLAGUE.

No cases were recognised in any part of the county.

SMALL-POX.

Small-pox.—Eighty-two cases were notified during the year, causing six deaths (3 in urban and 3 in rural districts); in the previous year 373, and during 1903, 409 cases were notified.

The following table indicates the districts from which cases were notified and the months in which such cases occurred.

Months.	County Borough of Tynemouth.	Wallsend.	Bedlington-shire.	Blyth.	Earsdon.	Go-forth.	Newburn.	Weetslade.	Whitley and Monkseaton.	Willington Quay.	Castle Ward.	Hexham.	Tynemouth No. 2.	River Tyne Port.	Total for Administrative County.
January ...	2	5	—	1	—	3	—	1	1	—	2	—	2	—	15
February ...	10	4	2	—	6	3	—	—	—	8	—	—	1	—	24
March ...	16	—	1	—	1	—	—	—	—	18	—	—	1	—	21
April ...	9	—	—	—	1	—	—	—	—	9	—	1	—	—	11
May ...	—	—	—	—	—	—	—	—	—	4	—	—	—	2	6
June ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
July ...	—	—	—	—	—	—	1	—	—	—	—	—	—	—	1
August ...	—	1	—	—	—	—	—	—	—	—	—	—	—	—	1
September ...	—	2	—	—	—	—	—	—	—	—	—	—	—	—	2
October ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
November ...	—	—	—	—	1	—	—	—	—	—	—	—	—	—	1
December ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Totals ...	37	12	3	1	9	6	1	1	1	39	2	1	4	2	82

CHICKEN-POX.

Chicken-pox was present in several urban and rural districts, the chief interest in connection with this disease being its resemblance to a very modified type of Small-pox.

SCARLATINA.

One thousand two hundred and eighty-nine cases of Scarlatina were notified during the year; 682 in the urban, and 607 in the rural districts, causing 35 deaths. The mortality from this cause in 1904 was 84, and in 1903 the deaths numbered 126. Of the 35 deaths, 21 occurred in the urban, and 14 in the rural districts.

The following table gives the comparative death rates:—

	Death Rate per 1,000.	Increase since 1904.	Decrease since 1904.
Administrative County ...	0·10	—	0·10
Urban districts ...	0·10	—	0·04
Rural districts ...	0·10	—	0·22
England and Wales ...	0·11	—	—

In the urban districts the greatest number of cases occurred in Bedlingtonshire (122), Cowpen (73), and Ashington (69).

In the rural districts the greatest number of cases occurred in Hexham (118), Tynemouth No. 2 (96), and Morpeth (87).

The subjoined table gives, for the years 1900-1905, the number of persons per 1,000 living attacked by scarlet fever, and the percentage of deaths of cases notified :—

Year.	Urban Districts.		Rural Districts.		Administrative County	
	Attack rate per 1,000 living.	No. of deaths per cent. of cases notified.	Attack rate per 1,000 living.	No. of deaths per cent. of cases notified.	Attack rate per 1,000 living.	No. of deaths per cent. of cases notified.
1900	4.49	4.3	4.61	3.0	4.53	3.9
1901	5.41	3.9	5.94	2.2	5.58	3.4
1902	9.85	3.1	7.24	1.4	9.02	2.7
1903	4.36	7.2	21.42	1.4	9.78	3.1
1904	5.24	2.7	8.04	4.0	6.12	3.2
1905	3.37	3.0	4.60	2.3	3.85	2.7
Mean.	5.45	4.0	8.64	2.3	6.48	3.1

MEASLES.

Eighty-five deaths occurred from Measles, 67 of which were in the urban, and 18 in the rural districts.

The following table shows the comparative rates:—

				Death Rate per 1,000.	Increase since 1904.	Decrease since 1904.
Administrative County	...	...	...	0.25	—	—
Urban districts	...	...	...	0.33	0.05	—
Rural districts	...	...	...	0.13	—	0.06
England and Wales	...	...	...	0.32	—	0.04

TYPHUS FEVER.

Two cases of this disease were reported in the county during the year under consideration; no deaths, however, were caused thereby.

ENTERIC FEVER.

Two hundred and seventeen cases of Enteric fever were notified during the year, resulting in 30 deaths. (The mortality from this cause in 1904 was 36, and in 1903, 48.) Of these deaths 26 occurred in the urban, and 4 in the rural districts.

The following table shows the comparative rates :—

				Death Rate per 1,000.	Increase since 1904.	Decrease since 1904.
Administrative County	...	...	...	0.08	—	—
Urban districts	...	...	...	0.12	0.03	—
Rural districts	...	...	...	0.03	—	0.02
England and Wales	...	...	...	*	—	—

*The Registrar General does not give the death rate for Enteric (or Typhoid) singly.

Of the 217 cases notified or ascertained during the year, 154 occurred in the urban, and 63 in the rural districts.

The number of cases notified per 1,000 living was 0·64. In the boroughs and urban districts the greatest number of cases occurred in Ashington (48), Bedlingtonshire (29), and Newburn (14).

In the rural districts the greatest number of cases occurred in Morpeth (20), Hexham (15) and Tynemouth No. 2 (9).

The periods of the year during which Enteric fever was most prevalent were the months of September (40 cases), October (32 cases), and January (28 cases).

The subjoined table gives, for the years 1900–1905, the number of persons per 1,000 attacked by Enteric fever, and the percentage of deaths occurring among the cases notified :—

Year.	Urban Districts.		Rural Districts.		Administrative County.	
	Attack rate per 1,000 living.	No. of deaths per cent. of cases notified	Attack rate per 1,000 living.	No. of deaths per cent. of cases notified	Attack rate per 1,000 living.	No. of deaths per cent. of cases notified
1900	0·82	21·5	0·56	19·4	0·75	21·0
1901	1·96	17·7	1·37	19·1	1·79	18·1
1902	0·65	16·2	0·63	33·7	0·64	21·7
1903	0·51	23·9	0·43	25·0	0·48	24·2
1904	0·56	16·8	0·45	11·6	0·50	15·4
1905	0·76	16·8	0·47	6·3	0·64	13·8
Mean.	0·87	18·8	0·65	19·1	0·80	19·0

DIPHTHERIA AND MEMBRANOUS CROUP.

Three hundred and eleven cases were notified during the year (139 cases from urban, and 172 from rural districts.)

The diseases (one or both of them) were notified or ascertained from the following 27 districts (30 districts in 1904) :—

Boroughs.—Berwick-on-Tweed and Wallsend.

Urban districts.—Alnwick, Amble, Ashington, Bedlingtonshire, Blyth, Corrypen, Cramlington, Earsdon, Gosforth, Hexham, Newbiggin, Newburn, Seghill, and Whitley and Monkseaton.

Rural districts.—Alnwick, Belford, Bellingham, Castle Ward, Glendale, Haltwhistle, Hexham, Morpeth, Norham and Islandshire, Tynemouth No. 1. and Tynemouth No. 2.

Fifty-nine deaths occurred from the above diseases during the year; 31 deaths were registered in the urban, and 28 in the rural districts.

The following table shows the comparative rates:—

				Death Rate per 1,000.	Increase since 1904.	Decrease since 1904.
Administrative County	...	...	...	0·17	0·05	—
Urban districts	...	...	...	0·15	0·07	—
Rural districts	...	...	...	0·21	0·02	—
England and Wales	...	...	...	0·16	—	0·01

The subjoined table shows, for the years 1900–1905, the number of persons per 1,000 attacked by Diphtheria and Membranous Croup, and the percentage of deaths occurring among the cases notified :—

Year.	Urban Districts.		Rural Districts.		Administrative County	
	Attack rate per 1,000 living.	No. of deaths per cent. of cases notified	Attack rate per 1,000 living.	No. of deaths per cent. of cases notified	Attack rate per 1,000 living.	No. of deaths per cent. of cases notified
1900	0·50	25·5	0·43	18·1	0·48	23·4
1901	0·50	23·3	0·75	14·8	0·57	19·8
1902	0·41	20·5	2·25	11·5	1·00	14·0
1903	0·43	26·6	2·12	20·2	0·98	22·1
1904	0·47	18·7	1·17	16·2	0·68	17·4
1905	0·60	22·3	1·30	14·5	0·93	18·0
Mean.	0·48	19·4	1·33	15·8	0·77	19·1

WHOOPIING COUGH.

Thirty-seven deaths were caused by whooping cough, 24 of which took place in the urban, and 13 in the rural districts.

The following table shows the comparative rates :—

				Death Rate. per 1,000.	Increase since 1904.	Decrease since 1904.
Administrative County	...	...	...	0·11	—	0·48
Urban districts	...	...	...	0·11	—	0·46
Rural districts	...	...	...	0·09	—	0·54
England and Wales	...	...	...	0·25	—	0·09

PUERPERAL FEVER.

This disease caused 10 deaths during the year, as compared with 15 in 1904. Of these deaths 3 occurred in the urban, and 7 in the rural districts.

The following table indicates the comparative rates :—

				Death Rate. per 1,000.	Increase since 1904.	Decrease since 1904.
Administrative County	...	...	...	0·02	—	0·01
Urban districts	...	...	...	0·01	—	0·03
Rural districts	...	...	...	0·05	0·03	—

ERYSIPELAS.

Erysipelas caused 6 deaths during the year; 3 in the urban, and 3 in the rural districts.

The comparative rates will be seen by reference to the following table :—

				Death Rate. per 1,000.	Increase since 1904.	Decrease since 1904.
Administrative County	...	...	...	0·01	—	0·02
Urban districts	...	...	...	0·01	—	0·02
Rural districts	...	...	...	0·02	0·01	—

DIARRHŒA.

The number of deaths from this cause was 159, as compared with 284 in 1904, and 217 in 1903. Of these deaths 117 occurred in urban, and 42 in rural districts:—

The following table shows the comparative rates:—

	Death Rate per 1,000.	Increase since 1904.	Decrease since 1904.
Administrative County	0·47	—	0·21
Urban districts	0·57	—	0·17
Rural districts	0·31	—	0·24
England and Wales	0·59	—	0·27

PHTHISIS.

Three hundred and forty-four deaths were caused by this disease in the Administrative County during the year, distributed as follows:—222 in the urban, and 122 in the rural districts. The number of deaths in 1904 was 490, and in 1903, 485.

The comparative rates are shown in the following table:—

	Death Rate per 1,000.	Increase since 1904.	Decrease since 1904.
Administrative County	1·02	—	0·15
Urban districts	1·09	—	0·11
Rural districts	0·92	—	0·20
England and Wales	*	—	—

* The Registrar-General does not give the death rate except for London.

The three highest Phthisis death rates per 1,000 births were recorded in the following districts:—

Urban Districts.	Phthisis Death Rate.	Rural Districts.	Phthisis Death Rate.
Newbiggin	1·97	Morpeth	1·23
Weetslade	1·83	Bellingham	1·16
Alnwick	1·61	Tynemouth No. 2	1·10

While the three lowest were recorded as under:—

Urban Districts.	Phthisis Death Rate.	Rural Districts.	Phthisis Death Rate.
Rothbury	Nil.	Tynemouth No. 1	0·58
Amble	0·40	Castle Ward	0·74
Whitley and Monk- seaton	0·66	Belford	0·76

The subjoined table indicates the deaths per 1,000 living caused by Phthisis during the years 1900–1905 :—

Year.			Urban Districts.	Rural Districts.	Administrative County.
1900	...	...	1·41	1·30	1·38
1901	...	...	1·27	1·19	1·25
1902	...	...	1·25	1·24	1·25
1903	...	...	1·29	0·98	1·19
1904	...	...	1·20	1·12	1·17
1905	...	...	1·09	0·92	1·02
Mean ...			1·25	1·12	1·21

The deaths and death rates arising from all forms of Tuberculosis in the county for the years 1900–1905 are shown in the following table :—

Year.		Phthisis.		Other tubercular diseases.		Total deaths from Tuberculosis.	
		Deaths.	Death Rate per 1,000 living.	Deaths.	Death Rate per 1,000 living.	Deaths.	Death Rate per 1,000 living.
1900	...	537	1·38	244	0·62	781	2·00
1901	...	495	1·25	280	0·71	775	1·98
1902	...	498	1·25	240	0·60	738	1·85
1903	...	485	1·19	323	0·79	808	1·98
1904	...	490	1·17	317	0·76	807	1·93
1905	...	344	1·02	239	0·71	583	1·73

RESPIRATORY DISEASES.

Respiratory diseases (exclusive of Phthisis), caused 632 deaths in the Administrative County during the year, 454 taking place in the urban, and 198 in the rural districts.

The following table shows the comparative rates :—

				Death Rate per 1,000.	Increase since 1904.	Decrease since 1904.
Administrative County	...	...	...	1·62	—	0·35
Urban districts	...	...	...	2·14	0·02	—
Rural districts	...	...	...	1·50	0·12	—

PORT SANITARY AUTHORITIES.

THE RIVER BLYTH PORT.

Medical Officer of Health, JOHN CROMIE, L.R.C.P., L.R.C.S.

The number of vessels arriving in port during the year was 3,082, representing a tonnage 1,987,485 tons register; being an increase of 191 vessels and of 134,927 registered tonnage, as compared with the year 1904

The ships were classified as follows:—

British steamers	...	...	...	...	986
British sailing vessels	...	...	...	...	90
Total number of British vessels	...	...	...	...	<u>1,076</u>
Foreign steamers	...	...	...	...	1,850
Foreign sailing vessels	...	...	...	...	<u>156</u>
Total number of Foreign vessels	...	...	...	...	<u>2,006</u>

These figures show an increase of sixty-four British and one hundred and twenty-seven foreign vessels as compared with the previous year.

Of the total arrivals one thousand four hundred and seventy came from British ports and one thousand six hundred and twelve from foreign ports.

The vessels found to have structural defects numbered thirty-four. The sanitary defects discovered numbered two hundred and twenty-four (seventy-six in British and one hundred and forty-eight in foreign vessels). Eighteen cases of illness on board were reported to the Medical Officer, four of which were of an infectious nature, viz.: Enteric fever three, and Erysipelas one. The two first cases of Enteric fever reported on February 3rd, were removed to the hospital at Ashington, the Port hospital being at the time blocked by a patient from the Blyth urban district suffering from Small-pox. The other case of Enteric fever and the patient suffering from Erysipelas were removed to the Port hospital. In addition to the above, five patients from the Blyth and two from the Cowpen districts were treated in the Port hospital; six of the patients were suffering from Enteric fever and one from Scarlet fever.

Inconvenience was again experienced owing to the Port Sanitary Authority having no facilities for isolating a case of Small-pox and at the same time another case of infectious disease other than Small-pox; thus in February the Port hospital being occupied by a Small-pox patient from the urban district of Blyth was unable to receive two Port cases of Enteric fever. If, later in the year, when Enteric fever cases from the Blyth or Cowpen districts were in the hospital, a case of Small-pox had occurred in the Port it would again have been impossible to send this patient (though a Port case) into the Port hospital. An arrangement made with the urban district council of Bedlingtonshire for an interchange of patients, in the event of difficulties of the above nature occurring, appeared to answer fairly well for some years, but the Bedlington Sanitary Authority having provided two hospitals are now able to isolate both Small-pox patients and persons suffering from infectious diseases other than Small-pox. During the year under consideration some difference of opinion occurred chiefly relating to charges for maintenance, etc., and the former arrangement fell through.

Under any circumstances the Port Sanitary Authority, whether they continue to cater for the neighbouring districts of Blyth and Cowpen as regards hospital accommodation or not, requires facilities for isolating at one and the same time both Small-pox and cases of infectious disease other than Small-pox. In the probable event of amalgamation between the urban districts of Blyth and Cowpen, and especially as the Port Sanitary Authority has, except for Small-pox, hospital accommodation greatly in excess of its requirements, it seems highly desirable that, if possible, some arrangement be made under which the three Authorities should jointly provide and make use of the hospital accommodation of which all are in need.

A steam disinfecter, for infective bedding, clothing, etc., has long been a requirement of the Port Sanitary Authority as well as of the two neighbouring authorities of Blyth and Cowpen; here again a great saving to each could be secured by combining to provide one for the three Authorities.

The medical officer provides a table showing for five years the establishment expenses of the hospital per annum, occupied or unoccupied; the patients' expenses per annum and per diem, and the amounts contributed by each authority during each year.

RIVER TYNE PORT.

Medical Officer of Health, WILLIAM HARKER, M.D., D.Hy.

During the year 1905 the following inspections of vessels were carried out :—

British steamers	...	...	...	...	...	...	3,889
British sailing vessels	...	...	...	...	...	...	190
British fishing vessels	...	...	...	...	...	...	1,117
Foreign steamers	...	...	...	...	...	...	2,123
Foreign sailing vessels	...	...	...	...	...	...	265
							<hr/> 7,584

In addition to inspecting the above, the following extra visits were made :—

Extra visits paid	...	...	...	...	...	...	520
Visits to water boats	...	...	...	...	...	...	18
Visits to gangways	...	...	...	...	...	...	17
							<hr/> 8,139

Twenty-nine vessels were visited by the Medical Officer of Health, on account of reported or suspected sickness on board.

The number of emigrants passing through the Tyne Port during 1905, so far as is known, was as follows :—

For America by White Star Line from Liverpool	...	797
„ „ Cunard Line „ „	...	1,043
„ „ American Line „ „	...	345
„ „ Allan Line „ „	...	142
„ „ Anchor Line from Glasgow	...	213
„ „ Dominion Line from Liverpool	...	69
„ „ Canadian Pacific	...	34
		<hr/> 2,643

being an increase of 334 as compared with the previous year.

The following cases were admitted to the Floating Hospital during the year:—Small-pox 2, Suspected Small-pox 5, Suspected Cholera 1, Suspected Plague 2, Beri Beri 2, Enteric fever 2, Suspected Enteric fever 1, Malta fever 2, Febricula 1, Tonsilitis 1, Dysentery 1, Diphtheria 1.

Four hundred and seventy-five cases of sickness were reported as having occurred during the voyage; this total included among others:—Small-pox or Suspected Small-pox 16, Enteric fever 12, Diarrhœa or Choleraic Diarrhœa 12, Suspected Plague 2, Beri Beri 13, Bronchitis, Pneumonia and Pleurisy 26, Diphtheria 1, Accidents 82.

The inspectors examined 1,243 consignments.—Onions 2, Wheat 66, Foreign and British fish 1,117, potatoes 12, fruit 42, rags 1, and cattle 3. In fifty-three cases the drinking water of ships, which came from ports infected, or suspected to be infected with Cholera, was changed, and the purification of the tanks was seen to by the Inspector, acting under the direction of the Medical Officer of Health. Also thirty-nine vessels and several lots of clothing or bedding were disinfected. One hundred and eighty beds were burnt, and ten lots of filthy clothing destroyed on account of infection.

No cases of Cholera or Yellow fever occurred in the Port during the year.

RIVER TWEED PORT.

Medical Officer of Health, D. HEAGERTY, L.R.C.P., L.R.C.S., L.M.

The sanitary authority of the borough of Berwick-on-Tweed constitutes the River Tweed Port Sanitary Authority.

The only reference in the medical officer's report is that sixteen ships from foreign ports were inspected.

BOROUGHES.

BERWICK-ON-TWEED.

Medical Officer of Health, D. HEAGERTY, L.R.C.P., L.R.C.S., L.M.

Area, 6,396 acres; estimated population, 13,420; birth rate, 25.55; general death rate, *16.31; zymotic death rate, 0.37; infant mortality rate (per 1,000 births), 116.61; Phthisis death rate, 1.19; death rate from respiratory diseases, 1.78.

With the exception of the infant mortality rate and the respiratory death rate, which have increased by 4.54 and 0.07 respectively, all the above rates have decreased as follows:—Birth rate, 0.38; general death rate, 1.04; zymotic death rate, 0.52; and Phthisis death rate, 0.59.

Three hundred and forty-three births were registered during the year, and two hundred and twenty-four deaths; of the latter forty were of children under one year, and eighty-nine of persons sixty-five years and upwards.

Sixty-two cases of infectious disease were notified as follows:—Diphtheria, 5; Erysipelas, 9; Scarlet fever, 35; Enteric fever, 11; and Continued fever, 2.

Five deaths occurred from zymotic disease, viz:—Scarlet fever, 2; Diphtheria and Membranous Croup, 1; Enteric fever, 1; and Diarrhoea, 1.

Phthisis caused 16 deaths; Respiratory diseases, 24; Heart diseases, 40; Accidents, 6; and Premature birth, 9.

The birth rate for Berwick was again lower than for the other divisions of this borough, but during 1905 it was higher in Tweedmouth than in Spittal. The rates for the three sub-divisions were as follows:—Berwick, 23.58; Tweedmouth, 30.51; and Spittal, 26.08 per 1,000 living.

The birth rate for the whole borough was the third lowest recorded in boroughs or in urban districts.

The death rate was highest in Tweedmouth, being 17.2; in Berwick the rate was 16.68; in Spittal 15.94 per 1,000 living.

The death rates under one year (per 1,000 births) were in Berwick 107.69, in Tweedmouth 95.74, and in Spittal 185.18.

The borough was entirely free from Small-pox and Puerperal fever.

Of the five cases of Diphtheria notified four occurred in Spittal and one in Berwick.

Of the nine cases of Erysipelas six occurred in Berwick and three in Tweedmouth.

Of the thirteen cases of Enteric and Continued fever notified eleven occurred in Tweedmouth and two in Spittal.

The infectious disease most in evidence during the year was Scarlet fever; thirty-five cases were notified twenty-two of which occurred in Berwick, seven in Spittal and six in Tweedmouth.

The medical officer considered the outbreak to be a continuation of a previous visitation in 1904.

Cases were notified during each month of the year with the exception of July, August, and December.

The zymotic death rate was the second lowest recorded in boroughs or in urban districts.

Factory and Workshop Act.—The factories numbered forty-nine, the workshops sixty-two, and home workers' premises six. Nearly five hundred visits of inspection were made; most of the defects found were remedied during the year.

In November, 1905, a report issued by the Property and Sanitation Committee of the county council referring to the condition of (1) Overcrowding and (2) Insanitary dwellings consequent upon overcrowding, showed that during the years 1891-1901 the number of tenements of one room occupied by more than two and by more than four persons, of two rooms occupied by more than four persons, and of three rooms occupied by more than six persons had decreased. The report also showed that overcrowding in this borough was chiefly in the direction of overcrowding of houses on area, which probably nothing but an Improvement Scheme under a loan sanctioned by the Local Government Board will ever rectify. The localities in which the above-named conditions were most in evidence and the serious drawbacks resulting therefrom were enumerated in the report, as also were the instances of overcrowding in houses which were few in number and most marked in Spittal. The insanitary dwellings consequent on overcrowding (chiefly of houses on area) were also mentioned; in one case the only ingress and egress for cows to and from a cowshed being through the interior of a dwelling house, manure having also to be removed through the house. The report also stated that in another locality the only facility for emptying two ash-pits was by wheeling or carrying their contents through a house.

Improvements.—No very great progress was made during the year; four rooms in Spittal were closed; legal proceedings were taken in one case of overcrowding, eleven other cases were remedied and one polluted water supply was discontinued. An enormous number of visits of inspection to houses, common lodging houses, bakehouses, factories, workshops, etc., were paid during the year and many minor improvements in drainage were effected; also a considerable and very commendable amount of disinfection was carried out in rooms after occupation by persons suffering from infectious disease.

Requirements.—The chief requirements in Berwick are the removal of "obstructive buildings" which are so placed that the sole means of access to dwelling houses is from or through narrow courts or alleys; the alteration of back to back houses and of other houses having no through ventilation, conditions which so greatly interfere with the admission of sunlight and the circulation of air, similar conditions being brought about in houses, though not built back to back with others, in which every room is let to a separate family.

In Tweedmouth the chief requirements are a greatly increased water supply, efficient drainage, the abolition of many pail closets placed in very undesirable situations and the provision of additional workmen's houses.

With reference to the water supply the conditions are most serious, as the medical officer has on many occasions pointed out, and in his report for 1905 warns his Authority that unless a better water supply is procured this portion of the district "may be invaded by an epidemic of fever." The water supply for Tweedmouth has for many years been most unsatisfactory; much of the water is procured from shallow wells liable to pollution; many of the inhabitants have to carry water for long distances and during the year 1905 the water supply from two wells was permanently lost through building operations. It is well known what disastrous consequences resulted at Lincoln from the disregard by the sanitary authority of their medical officer's warning. It appears that the experience at Lincoln may probably be repeated in this district.

In Spittal the chief requirements are an increased water supply and the alteration of houses not having through ventilation. The necessity

for an increased water supply for Tweedmouth and Spittal has been admitted for several years and the best means for providing the same have been discussed on many occasions. A considerable amount of money has also been spent in acquiring information and in making preliminary experiments with the result that an additional supply of excellent water has been obtained on the site of the borough's water works. This supply though not required by the Berwick division was denied to Tweedmouth and Spittal on being put to the vote. The present result is that the borough of Berwick-on-Tweed has much more water than is required for the Berwick sub-division, that the Tweedmouth and Spittal sub-divisions have an inadequate and Tweedmouth a dangerous supply and that any use of the surplus water not required in Berwick is denied to Tweedmouth and Spittal.

The medical officer's annual report should be printed.

* 16.69 if the deaths of five non-residents occurring in the district be deducted and if ten deaths of residents occurring without the district be added.

MORPETH.

Medical Officer of Health, H. DICKIE, M.A., M.D.

Area, 328 acres; estimated population, 6,437; birth rate, 30.13; general death rate, *18.64; zymotic death rate, 1.24; infant mortality rate (per 1,000 births), 113.4; Phthisis death rate, 1.55; death rate from respiratory diseases, 2.17.

With the exception of the respiratory death rate, which has increased by 0.13 in comparison with the previous year, all the above rates have decreased as follows:—Birth rate, 2.28; general death rate, 4.16; zymotic death rate, 2.85; infant mortality rate, 66.21; and Phthisis death rate, 0.02.

One hundred and ninety-four births were registered during the year, and one hundred and twenty deaths; of the latter twenty-two were of children under one year, and thirty-five of persons sixty-five years and upwards.

Five cases of infectious disease were notified as follows:—Scarlet fever, 4; and Enteric fever, 1.

Eight deaths occurred from Zymotic disease, viz:—Whooping cough, 5; Enteric fever, 2; and Diarrhœa, 1.

Phthisis caused 10 deaths; Respiratory diseases, 14; Heart diseases, 16; Accidents, 4; and Premature birth, 7.

Whereas during 1904 this district was visited by almost every kind of infectious disease, and besides outbreaks of Whooping cough and Measles (which are not notifiable diseases) eighty-three cases of infectious disease occurred including twenty-two of Small-pox, the year 1905 is described by the medical officer as having been one of the least eventful from a sanitary point of view. There was an almost total absence of infectious disease, a considerable decrease in the death rate, especially amongst infants, and less than the average number of cases calling for the interference of the public health officials.

Four cases of Scarlet fever and one case of Enteric fever formed the sum total of notifiable infectious diseases and the Infant mortality rate showed a decrease of 66 per 1,000 births as compared with the previous year, of 35 per 1,000 births on the average of the last ten years and was the lowest rate recorded since the year 1897.

The Factory and Workshop Act.—The factories on the register at the end of the year numbered eighteen, the workshops twenty-three and the workplaces four. Sixty-six visits of inspection were made and hardly any defects were met with.

In November, 1905, a report issued by the Property and Sanitation Committee of the county council referring to the condition of (1) Overcrowding and (2) Insanitary dwellings consequent upon overcrowding, indicated that during the years 1891-1901 the number of one-roomed tenements occupied by more than two and by more than four persons, and also the two-roomed tenements occupied by more than four persons had decreased, yet the number of three-roomed tenements occupied by more than six persons had increased.

Improvements.—Several houses and eighteen cottages were built.

A new sewer was laid in Newgate Street and new drains were provided for several premises; in a few cases privies or ash closets were replaced by w.c.'s. Considerable improvements were effected by providing new footpaths and by repairing several yards. Some cases of overcrowding were dealt with.

The improvements mentioned above though good as far as they go hardly touch the fringe of the many insanitary conditions which are still so greatly in evidence.

Requirements.—In spite of building operations carried out during the year and previously, the scarcity of small houses for the labouring classes was still very much felt, and doubtless contributed to the readiness with which tenants were secured for several houses possessing many and serious defects from a sanitary point of view.

The medical officer states that "there are still a great number of poorer class houses in Morpeth tenemented or up imperfectly ventilated yards which are far from being compatible with modern requirements. While the bulk of these are only defective and just possibly habitable under strict supervision, the effect of these defects on public health, if not immediately apparent, cannot fail to be considerable. An old town like this must and does fall far short of perfection; the more glaring defects are gradually being attended to, but unless very considerable expense can be incurred in buying up and clearing away property which interferes with a full supply of light and air, it is impossible to make any sweeping improvements. Some of the worst houses, *e.g.*, in Union Street, were seriously attacked by your authority this year, and the threat of legal action had the effect of considerable improvements being made. Even at the best, Union Street as at present must remain a serious blot on this town," but on referring to the report issued in November by the Property and Sanitation Committee of the County Council it will be seen that the above remarks by the district medical officer deal most tenderly, mercifully and gently with conditions which might with equal truthfulness be described as a disgrace to any municipal borough and a standing blot on its sanitary administration. Union Street, in particular, combines every insanitary condition and though one house was vacated and some minor improvements effected nothing short of pulling down some of the houses can make it satisfactory. Privy ashpits in a thickly populated town and especially when the contents must be wheeled out through narrow passages should be replaced by w.c.'s. These remarks apply not only to Union Street, where the contents of seven ash closets serving fifteen families are wheeled *through the houses*, but also to Cappell Place, Newgate Street, Dogger Bank, Hampton Court and other places mentioned in the report of the Property and Sanitation Committee. The council have ample power under the Public Health Act, 1875, Section 36, to effect this change as the houses are "without sufficient privy accommodation" and also under Section 91 as an undoubted nuisance is caused every time the contents of a privy ashpit are wheeled through a narrow passage close to the windows and doors of adjacent houses.

Where stable manure has to be wheeled out through narrow passages access for a cart should be provided or the stable dealt with under the nuisance clauses of the Public Health Act.

Several cases of overcrowding in houses were found during the year, in many instances aggravated by want of through ventilation in the dwellings. Both the above conditions require alteration.

Privy accommodation was also inadequate (as well as in other ways unsatisfactory) in many situations; this condition is easily, and should be dealt with by the council.

Several of the cowsheds are structurally defective and should be taken in hand for which the Dairies, Cowsheds and Milkshops Order and the Public Health Act, 1875, provide ample powers.

* 17.39 if ten deaths of non-residents occurring in the district be deducted and if two deaths of residents occurring outside the district be added.

WALLSEND.

Medical Officer of Health, T. WILSON, L.R.C.P., M.R.C.S.

Area, 1,158 acres; estimated population, 23,868; birth rate, 38.67; general death rate, *12.56; zymotic death rate, 1.17; infant mortality rate (per 1,000 births), 127.84; Phthisis death rate, 1.08; death rate from respiratory diseases, 1.84.

With the exception of the Phthisis death rate, which has increased by 0.20, all the above rates have decreased as follows:—Birth rate, 1.9; general death rate, 2.59; zymotic death rate, 1.05; infant mortality rate, 26.59; and the respiratory death rate, 0.29.

Nine hundred and twenty-three births were registered during the year, and three hundred deaths; of the latter one hundred and eighteen were of children under one year, and thirty-five of persons sixty-five years and upwards.

Twenty-eight deaths occurred from zymotic disease, viz:—Small-pox, 1; Measles, 3; Scarlet fever, 1; Whooping cough, 7; Diphtheria and Membranous Croup, 4; Enteric fever, 3; and Diarrhœa, 9.

Phthisis caused 26 deaths; respiratory diseases, 44; heart diseases, 8; accidents, 9; and premature birth, 17.

The birth rate was the third highest in the administrative county.

The exceedingly low general death rate 12.69 for an urban district of this character is the lowest recorded since 1897.

The infant mortality rate was also considerably below (26 per 1,000 births) that recorded for the previous year and also was the lowest since the year 1897.

The medical officer discusses at some length the excessive infant mortality which obtains in all quarters, and as regards this district in particular attributes it to the following causes:—

1. A too short period of rest for the mother after a confinement, resulting in a milk supply deficient in quantity and quality.

2. The resort by the mother to stimulants to remedy the above deficiency causing most detrimental effects to mother or child or both, especially as much of the whisky sold is manufactured from anything rather than from malt.

3. The difficulty in obtaining proper nourishment owing to high rents, her own thriftlessness, or the intemperance of her husband or herself or both.

4. The increasing tendency to wean children when only a few weeks old and so “deprive them of the nourishment which above all other influences tends to reduce the deaths occurring under one year.”

5. The small ill-ventilated rooms, especially bedrooms, causing the child to live in a poisonous atmosphere during eight out of every twenty-four hours.

One hundred and twelve cases of infectious disease were notified as follows:—Smallpox 12, Diphtheria and Membranous Croup 26, Erysipelas 17, Scarlet fever 49, and Enteric fever 8.

The chief incidence of the scarlet fever outbreak was upon the Holy Cross, Buddle and Carville sub-divisions.

It was again a satisfactory feature in the statistics for 1905 that with an increase in the population estimated at over 1,300 the cases of infectious disease were less numerous (by 78) than during the previous year; also that though only twelve of the one hundred and twelve cases notified were Small-pox, still 37 per cent. of all the cases notified were treated in the excellent isolation hospital belonging to this and the adjoining sanitary authority.

Factories and Workshops.—The former numbered twenty-eight and the latter forty-eight. They were all inspected and for the most part found satisfactory; the few defects found were remedied.

Pollution of Rivers and Streams.—Three farm premises—the West Farm, the Westmoreland Cottage Farm and the High Farm—continued to pollute the Wallsend Burn by discharging into it untreated sewage. The owners or agents (or both) of these properties were communicated with on the above subject and also the borough council but at the end of the year the conditions alluded to were unchanged.

Improvements.—The chief improvements effected during the year were as follows:—Many new houses were built; scavenging was carried out during the last five months by the council's men instead of under contractors; nineteen more privy ashpits were abolished and w.c.'s provided; houses were disinfected after a death from Phthisis as well as after other infectious diseases.

The Small-pox hospital, which from its nearness to the hospital for infectious diseases has prevented a loan being sanctioned for the enlargement of the latter, was removed with a view of providing a joint Small-pox hospital for Wallsend and Willington Quay.

Requirements.—Increased hospital accommodation for patients suffering from infectious disease other than Small-pox, also increased housing accommodation.

* 12·69 if the deaths of three residents occurring outside the district be added.

URBAN DISTRICTS.

ALNWICK.

Medical Officer of Health, R. B. ROBSON, M.B., M.R.C.S.

Area, 4,777 acres; estimated population, 6,800; birth rate, 27.05; general death rate, *17.79; zymotic death rate, 0.88; infant mortality rate (per 1,000 births), 81.52; Phthisis death rate, 1.61; death rate from respiratory diseases, 2.05.

With the exception of the birth rate and the respiratory death rate, which have each increased by 0.12, all the above rates have, as compared with the previous year, decreased as follows:—General death rate, 0.64; zymotic death rate, 0.31; Phthisis death rate, 0.91; and infant mortality rate, 89.75.

One hundred and eighty-four births were registered during the year, and one hundred and twenty-one deaths; of the latter fifteen were of children under one year, and fifty-six of persons sixty-five years and upwards.

Seven cases of infectious disease were notified as follows:—Diphtheria 1, Erysipelas 3, and Scarlet fever 3.

Six deaths occurred from zymotic disease, viz:—Measles, 3; Whooping cough, 1; and Diarrhœa, 2.

Phthisis caused 11 deaths; respiratory diseases, 14; heart diseases, 10; accidents, 4; and premature birth, nil.

The medical officer divided the district for the purpose of his annual report into "Town"—that portion served by the public sewers—and "County" comprising Alnwick Moor and a few outlying houses.

The death rate from all causes was three times higher in the Town than in the County division.

With the exception of the death rate from respiratory diseases, all the mortality rates showed a decrease compared with the previous year, the decrease being especially marked in the case of the infant mortality rate which was 58 per 1,000 births below the average of the last ten years, and the second lowest recorded in urban districts.

The Phthisis death rate, however, was the third highest in the Administrative County.

The district was remarkably free from diseases of an infectious nature; of notifiable diseases seven only occurred, none of which terminated fatally. Of non-notifiable diseases a few cases of Measles and Whooping-cough occurred, the first-named disease causing three and Whooping-cough one death.

Factory and Workshop Act, 1901.—Forty-nine workshops were on the register at the end of the year; eight defects were found all of which were remedied.

In November, 1905, a report issued by the Property and Sanitation Committee of the county council referring to the conditions of (1) Overcrowding and (2) Insanitary dwellings consequent upon overcrowding, indicated that during the years 1891 to 1901 the one-roomed tenements occupied by more than two and by more than four persons, also the two-roomed tenements occupied by more than four persons had decreased, yet the three-roomed tenements occupied by more than six persons, had increased. The report also showed that overcrowding in this borough is chiefly in the direction of overcrowding of houses on area, which probably nothing but an Improvement Scheme under a loan sanctioned by the Local Government Board will ever rectify. The localities in which the above-named conditions were most in evidence and the serious

drawbacks resulting were enumerated in the report, as also were the instances of overcrowding in houses. This report indicated that with one exception the condition of Alnwick as regards overcrowding of houses on area and of obstructive buildings (both of which interfere with a due supply of light and air and with the facility of approach for the removal of refuse, etc.) was very much the same in 1905 as in 1897 when a report dealing with the above conditions was issued by the county medical officer. The one exception alluded to above is that an Improvement Scheme has been carried out under which one area has been considerably improved. As regards the rest of the town but little alteration for the better was to be noticed, with reference to either overcrowding of houses on land (in many cases constituting unhealthy areas), obstructive buildings or insanitary dwellings, but there was some little indication that a sanitary conscience was trying to awaken among the inhabitants, the number of nuisances to be dealt with in connection with waste materials from dwelling houses and waste paper from business premises and ashboxes having perceptibly decreased. As regards overcrowding in houses there was during the year under consideration a very regrettable amount though it was less marked than during 1897.

Improvements.—Sixty-two new dwellings were provided during the year and the erection of four new houses commenced.

Long needed alterations at the hospital were completed and after many months of delay a site was obtained and plans for a Small-pox hospital for the joint use of the urban and rural districts were submitted and approved, but up to the end of the year no tenders had been invited.

The council seriously considered the desirability of providing a cattle market and of thereby putting an end to the practice of holding the cattle market in the market place and on Bondgate Hill, the last-mentioned custom being productive of considerable nuisance to the public and of great cruelty to stock, the tender mercies of the average drover being cruel. One or two sites for the above-named purpose were considered but no definite conclusion was arrived at.

A new sewer was laid in Denwick Lane, additional facilities for flushing sewers and for watering streets were provided, resulting in a considerable saving of the inadequate supply for domestic purposes. In more than one locality the condition of roads and footpaths was improved.

As a result of the very considerable inconvenience experienced during the summer in consequence of the inadequate water supply and the absence of proper storage capacity, reports were submitted to the council by the Town Surveyor and Mr. Lucas, Hydro-Geologist, dealing with the best methods of temporarily and permanently increasing the water supply to the town and negotiations were commenced with a view of procuring a site for a storage reservoir.

Many improvements were effected in house drainage and other sanitary conditions in and around houses in various parts of the town.

The long delayed scheme for disposing of the sewage from Canongate without polluting the river Aln and for improving the existing disposal works for the rest of the town was at length forwarded to the Local Government Board and an enquiry was held by one of the Board's Inspectors in September, the result being that the Board refused their sanction to the proposed scheme.

Requirements.—A plentiful supply of water and increased storage capacity continued up to the end of the year to be the most urgent and still unfulfilled requirements of this district. In order to eke out the scanty supply available the town mains were of necessity shut off during nearly one hundred nights, the drawbacks and dangers of adopting such a course being now pretty generally understood. About $4\frac{1}{2}$ million gallons had to be provided by pumping from Rugley Springs and Craster Place and probably from Rugley Burn which latter the medical

officer points out "with its feeders, being surface water flowing through moor and arable land is especially liable to contamination by the excreta of cattle and sheep and from surface washings of fields recently manured." The medical officer proceeds, "I cannot, therefore, too strongly urge the council to deal without further delay with the question of the water supply, as from its scarcity and quality it is an imminent source of danger to the health of the town." Whatever results, therefore, may arise from future delay in providing an adequate supply of pure water for domestic purposes and also a supply which might at any time be required for extinguishing fires, it is clear that the medical officer has spoken in the plainest and most decisive manner possible and that upon the sanitary authority alone will rest the whole responsibility of any disastrous consequences.

Increased housing accommodation for the labouring classes was still urgently needed, and the conditions alluded to in the above-mentioned report of the Property and Sanitation Committee of the county council require amelioration.

A public mortuary and also means for isolating patients suffering from Small-pox were also up to the end of the year much needed requirements.

In view of the difficulty in procuring tips for refuse within a reasonable distance the medical officer advocates the provision of a refuse destructor, which, owing to improvements recently effected in their destructor, which, owing to improvements recently effected in construction, can now be supplied to meet the case of a population of 4,000 to 5,000.

* 16.47 if the deaths of nine non-residents occurring in the district be deducted.

AMBLE.

Medical Officer of Health, H. M. STUMBLES, M.B., Ch.B.

Area, 1,258 acres; estimated population, 5,000; birth rate, 29.8; general death rate, 11.2; zymotic death rate, 0.6; infant mortality rate (per 1,000 births), 107.38; Phthisis death rate, 0.4; death rate from respiratory diseases, 0.20.

Of the above rates the birth rate and infant mortality rate have increased by 1.4 and 8.79 respectively, as compared with the previous year, while the remainder of the rates decreased as follows:—General death rate, 4.8; zymotic death rate, 1.0; Phthisis death rate, 0.4; and the respiratory death rate, 1.0.

One hundred and forty-nine births were registered during the year, and fifty-six deaths; of the latter sixteen were of children under one year, and seven of persons sixty-five years and upwards.

Thirty cases of infectious disease were notified as follows:—Diphtheria 2, Enteric fever 3, Erysipelas 3, Scarlet fever 21 and Puerperal fever 1.

Three deaths occurred from zymotic disease, viz:—Scarlet fever 2 and Diphtheria and Membranous croup 1.

Phthisis caused 2 deaths; respiratory diseases, 1; heart diseases, 3; accidents, 5; and premature birth, nil.

The general death rate (11.2 per 1,000) was the second lowest in any urban district and the third lowest in the administrative county. The Phthisis death rate was the second lowest in the county. The number of cases of infectious disease (thirty) notified during the year compared very favourably with eighty-eight in 1904. The district was entirely free from Small-pox and Epidemic Diarrhœa.

Factory and Workshop Act.—There were in the district eighteen factories and thirty-two workshops. These were regularly inspected and the suggestions made with reference to defects found were carried out.

A report issued in November, 1905, by the Property and Sanitation Committee on (1) Overcrowding and (2) Insanitary dwellings consequent on overcrowding showed that, between the years 1891 and 1901, while the number of one-roomed tenements occupied by more than two and by more than four persons respectively had decreased, the number of two-roomed tenements occupied by more than four persons and of three-roomed tenements occupied by more than six persons had increased.

Improvements.—The medical officer reports that much has been done to maintain and improve the general sanitary condition of the district and considers that the thoroughness with which scavenging has been performed by the council, as compared with the unsatisfactory way in which this work is too frequently carried out by contractors, together with the making up of back streets and attention to drainage are the chief causes of the very low mortality rates, and the comparative freedom from infectious diseases enjoyed by the inhabitants during the year.

Requirements.—The chief requirements of this district appear to be :—

1. The substitution of w.c.'s for privy middens, this action being more particularly urgent in localities where owing to surrounding buildings but little air circulates and where the contents of privy middens are wheeled out, in some cases, through narrow passages. Instances of the above were to be found in Duncan's Buildings, in High Street, Church Street and Wellwood Street. In Henderson Street the privy accommodation provided for ten families was most unsatisfactory.

The medical officer remarks that a complete water carriage system throughout the town is an ideal which the council must ever have before it to ensure the even better health of the inhabitants. With the abundant water supply possessed by the council this much needed improvement could easily be effected as already has been carried out in another urban district.

2. The providing of through ventilation for several houses, this being especially desirable in one-roomed houses, occupied night and day and during the greater portion of the year closed for many hours in succession. A considerable number of one-roomed tenements were still in existence and in one or two overcrowding was apparent.

3. A nuisance is frequently caused by the condition of the burn at the foot of the Wynd; this also requires the council's attention.

ASHINGTON.

Medical Officer of Health, R. J. MILLS, M.B., B.S.

Area, 2,870 acres; estimated population, 18,300; birth rate, 39.28; general death rate, *15.13; zymotic death rate, 1.14; infant mortality rate (per 1,000 births), 175.24; Phthisis death rate, 1.03; death rate from respiratory diseases, 1.20.

With the exception of the Phthisis death rate, which has increased by 0.56 as compared with the previous year, all the above rates have decreased as follows :—Birth rate, 2.36; general death rate, 3.8; zymotic death rate, 0.62; infant mortality rate, 47.92; and the respiratory death rate, 0.27.

Seven hundred and nineteen births were registered during the year, and two hundred and seventy-seven deaths; of the latter one hundred and twenty-six were of children under one year, and twenty-four of persons sixty-five years and upwards.

One hundred and sixty-eight cases of infectious disease were notified as follows:—Diphtheria 27, Erysipelas 18, Scarlet fever 69, Enteric fever 48, Continued fever 4, and Puerperal fever 2.

Twenty-one deaths occurred from zymotic disease, viz:—Scarlet fever 2, Diphtheria and Membranous Croup 6, Enteric fever 8, and Diarrhœa 5.

Phthisis caused 19 deaths; respiratory diseases, 22; heart diseases, 17; accidents, 4; and premature birth, 23.

The district is divided into two wards—Ashington and Hirst—and the medical officer gives some interesting tables which indicate for each month the number of births and deaths which occurred in each ward, the age periods at which the deaths took place and also the causes of death; similarly for infectious diseases the number of cases of each disease notified as well as the month and locality in which they occurred and the age period at which the patients were attacked.

The population of the Ashington division was estimated to be 6,900, and of the Hirst division 11,400, indicating an increase of 200 in Ashington and of 1,100 in Hirst since the previous estimation.

The birth rate for the whole district was the second highest recorded in the county.

The birth rate in Hirst was as usual greatly in excess of the birth rate in Ashington, being 48.8 per 1,000 in the former and 23.4 per 1,000 in the latter division.

The death rate in the Hirst division (17.5 per 1,000) was also much higher than in Ashington (11.01).

The infant mortality rate (deaths per 1,000 births registered) was in Hirst 190, and in Ashington 123.

The higher birth rate in Hirst is no doubt accounted for by the greater proportion of young married people in that division, and as so many childrens' lives are sacrificed during their first year of existence it follows that a high birth rate almost invariably means a high infant mortality rate. A high birth rate also adversely affects the general death rate since the latter refers to deaths at all ages.

It is most satisfactory to note that the infant mortality rate was lower than during the previous year by over 47 per 1,000 births, that the general death rate for the whole district showed a decrease of over three per thousand, and that it was the lowest recorded since the foundation of this urban district. The zymotic death rate was also lower than that recorded during the previous year.

The reduction in the general death rate and also in the infant mortality and in the zymotic death rates alluded to above indicates that an improvement has been effected in the general sanitary condition of the district and also, as regards the infant mortality, warrants the hope that the advice which has been so persistently given, as to the management and feeding of infants, is beginning to bear fruit in the more rational treatment of young children.

Factories and Workshops.—The former numbered five and the latter twelve. They were all inspected and with few exceptions were found satisfactory.

Improvements.—Nearly two hundred houses were built and occupied during the year and great improvements were effected by making up streets, widening footpaths and additional lighting.

The distribution of water was better than during the previous year; three pressure tanks and additional taps in Hirst were provided. Flushing tanks were provided for three sewers. Additional carts were procured for street watering and scavenging and ashpits were sprayed with lime, the new pumps increasing the efficiency of this work and reducing the cost.

The hospital was made use of to a much greater extent than during the previous year, forty patients having been treated from the Ashington district and two from an adjacent district, which indicates that the public are becoming increasingly alive to the many advantages and comforts attending hospital treatment and skilled nursing. Electric light was substituted for the oil lamps previously in use at the hospital and a trained nurse was placed in permanent residence.

On the recommendation of the medical officer the council decided to defray the expense of Diphtheria Antitoxin and also sent out notices relating to precautions which should be adopted for preventing the spread of consumption.

Requirements.—The requirements of this rapidly increasing district are the same as indicated a year ago, viz: the adoption of a sewage disposal scheme, long considered and long delayed. Measures for obviating the polluted condition of Haydon Letch and the River Lyne, which was reported to the Ashington district council in 1894, 1897, 1900, and twice in 1904. During the year 1905 the council after considering the matter for more than ten years directed an engineer to prepare a sewage disposal scheme; this scheme was prepared and submitted before the year closed.

The provision of sand filters if the present water supply from the mines is to be continued. Enforcement of the bye-laws, especially those relating to new streets and buildings and the keeping of animals. Provision of cement concrete floors and lining the interior of all ash-pits with the same material and the exclusion of all roof and rain water from those receptacles. Also a better distribution of water especially at Hirst.

* 15·08 if the death of one non-resident occurring in the district be deducted.

BEDLINGTONSHIRE.

Medical Officer of Health, R. S. TROTTER, M.D., C.M.

Area, 8,533 acres; estimated population, 20,500; birth rate, 33.07; general death rate, 15.95; zymotic death rate, 1.36; infant mortality rate (per 1,000 births), 154.86; Phthisis death rate, 1.07; death rate from respiratory diseases, 2.09.

As compared with the previous year the whole of the above rates have decreased as follows:—Birth rate, 3.38; general death rate, 2.4; zymotic death rate, 0.89; infant mortality rate, 26.2; Phthisis death rate, 0.03 and the respiratory death rate, 0.41.

Six hundred and seventy-eight births were registered during the year, and three hundred and twenty-seven deaths; of the latter one hundred and five were of children under one year, and sixty-one of persons sixty-five years and upwards.

One hundred and seventy-nine cases of infectious disease were notified as follows:—Small-pox 3, Diphtheria 5, Erysipelas 16, Scarlet fever 122, Enteric fever 29, Continued fever 3, and Puerperal fever 1.

Twenty-eight deaths occurred from zymotic disease, viz:—Measles 8, Scarlet fever 3, Diphtheria and Membranous croup 3, Enteric fever 5, and Diarrhoea 9.

Phthisis caused 22 deaths; respiratory diseases, 43; heart diseases, 30; accidents, 10 and premature birth, 31.

This district was as usual divided by the medical officer into seven localities, in each of which it was estimated that the population had increased, giving an increase for the whole district of five hundred.

The medical officer gives some interesting and valuable tables in which are set out for each sub-division, the population, births registered, deaths at all ages and deaths under one year, and the causes

of death; also the number and nature of cases of infectious disease notified. From one of the above-named tables it appears that the general death rate was below the average for the whole district in Barrington, Netherton, Bedlington and East and West Sleekburn and above the average in Sleekburn and Choppington.

Among the infectious diseases prevalent in the district may be mentioned Small-pox (three cases all in Bedlington), Scarlet fever (122 cases chiefly in Choppington, Bedlington, Netherton and Sleekburn), Enteric and Continued fever thirty-two cases the chief incidence of the disease being on the Choppington, Bedlington and Barrington subdivisions, Netherton being the only locality in which no case occurred.

Measles was prevalent in Cambois, Choppington and Sleekburn, during the months of January, February, March, April and August.

Factories and Workshops.—Seventy-eight workshops were on the register and one hundred and three visits of inspection were paid. Several defects were discovered and remedied.

A report issued in November by the Property and Sanitation Committee of the county council referring to (1) Overcrowding, and (2) Insanitary dwellings consequent on overcrowding, showed that, during the years 1891-1901, the number of tenements of one room occupied by more than two and by more than four persons respectively, of two-roomed tenements occupied by more than four persons, and of three-roomed tenements occupied by more than six persons had decreased.

Improvements.—It is gratifying to note the reduced number of deaths from Diarrhœa and Enteritis, no doubt due to some improvement which was noticeable, especially in certain localities, in the manner of feeding very young children; in connection with this subject the medical officer bears witness to the valuable assistance derived from district nurses, who, in going from house to house, quietly disseminate knowledge which cannot fail to produce most valuable results.

One hundred and ninety additional houses were in occupation, new schools were commenced and the sanitary condition of several old schools was improved. The sewerage and drainage system was still further improved and the scheme for re-sewering a considerable amount of property in West Bedlington received the sanction of the Local Government Board, after an Inquiry held by one of the Board's inspectors in March. Water mains were extended to meet the requirements of newly erected houses; but besides these extensions additional facilities for procuring water were afforded by the provision of stand-pipes in various parts of the district. A step most conducive to improving hygienic conditions was the appointment of a Sanitation Committee, one of whose duties will be to enquire into and report upon all insanitary conditions.

Some privy ashpits to which there was no access for a cart were abolished and w.c.'s and dry ashpits substituted. Scavenging was carried out on the whole with less difficulty than usual and the council took into their own hands the scavenging of the Barrington district. It has frequently been pointed out that in populous districts scavenging is seldom, if ever, carried out satisfactorily unless undertaken by the council's own men, and that wherever this plan has been adopted in lieu of letting the work to contractors, not only has the work been effected with greater regularity and efficiency, but when a strict account has been kept of all expenses incurred by the council it has been found that a considerable saving in expense has been secured.

Some improvement was effected during the year in laying and repairing footpaths chiefly in Bedlington and by the side of the main roads and the condition of these roads was also much improved.

Lighting was much improved in Bedlington, Sleekburn, West Sleekburn, Barrington and Cambois.

Increased facilities for disinfection were provided at the new isolation hospital.

Requirements.—From reports issued by the Property and Sanitation Committee of the county council in March and November, 1905, and also from the report of the district medical officer of health, it appears that the requirements for this district from a sanitary standpoint were many and urgent and that though a considerable amount of good work had been done during recent years, especially in the direction of providing an increased filtration area at the Waterworks and of re-sewering portions of the district, the erection of a second isolation hospital and the improvement of main roads and footpaths, etc., etc., still the insanitary conditions were so numerous and so serious that there was little chance of them being dealt with in any reasonable time unless they were tackled with energy and determination and unless a higher standard of efficiency were adopted for the future than has sufficed in the past. It is much to be hoped that the new sanitation committee alluded to under the head of "Improvements" will devote a considerable amount of time to thoroughly overhauling the insanitary conditions prevailing in so many localities and that their labour will be rewarded by greatly improved conditions in and around the houses.

It will be unnecessary to enumerate here all the defects mentioned in the three reports above-named as the latter have been widely circulated; reference, however, may be made to the inadequate supply of houses at present available; to the conditions prevailing at the east end of Bedlington, constituting the streets mentioned an "unhealthy area," which nothing short of an Improvement Scheme can rectify; to obstructive buildings in various localities named, which not only interfere with the admission of sunlight and with the proper circulation of air, but also with the removal of house and other refuse, the contents of most insanitary privy ashpits having in many instances to be wheeled out through narrow passages and in some cases through the houses; to houses built back to back and others unprovided with any through ventilation; to houses overcrowded by inmates and having badly paved yards and insufficient drainage and privy accommodation; to the desirability of the council adopting the Public Health Acts Amendment Act, 1890, and the Infectious Diseases Prevention Act, 1890, both of which give important assistance in dealing with sanitary matters; to the desirability of framing a new set of bye-laws (most of the existing bye-laws dating back to 1862) and of adopting regulations under the Dairies, Cowsheds and Milkshops Order; to the necessity of providing still further area of sand filtration at the Waterworks and additional standpipes in various localities; to the repairing of many yards and the improvement of many roads and footpaths especially in the neighbourhood of colliery rows, and to the necessity of substituting w.c.'s for many of the privy ashpits at present existing in confined yards and close to dwelling-houses.

BLYTH.

Medical Officer of Health, JOHN CROMIE, L.R.C.P., L.R.C.S.

Area, 1,264 acres; estimated population, 6,271; birth rate, 27.58; general death rate, *13.55; zymotic death rate, 1.59; infant mortality rate (per 1,000 births), 132.94; Phthisis death rate, 0.95; death rate from respiratory diseases, 2.07.

With the exception of the Phthisis death rate which has increased by 0.13, all the above rates have, as compared with the previous year, decreased as follows:—Birth rate, 3.65; general death rate, 2.69; zymotic death rate, 0.54; infant mortality rate, 14.42; and the respiratory death rate, 0.06.

One hundred and seventy-three births were registered during the year, and eighty-five deaths; of the latter twenty-three were of children under one year, and twelve of persons sixty-five years and upwards.

Eighty-eight cases of infectious disease were notified as follows:—Small-pox 1, Diphtheria 7, Membranous Croup 2, Erysipelas 6, Scarlet fever 30, Enteric fever 8, and Chicken-pox 34.

Ten deaths occurred from zymotic disease, viz:—Measles 5, Diphtheria and Membranous Croup 1, and Diarrhœa 4.

Phthisis caused 6 deaths; respiratory diseases, 13; heart diseases, 5; accidents, 9; and premature birth, 11.

The district is divided into Wards—North and South; the birth rate for the former was 24.6 and for the latter 35 per 1,000, and as might be expected from the above the infant mortality rate in the South Ward was higher than in the North Ward, being 145 per 1,000 births in the former and 126 in the latter. The zymotic death rate also was higher in the South than in the North Ward.

It is satisfactory to note that the general death rate for the whole district was the third lowest in urban districts in the county and was the lowest recorded during the last decade, also that the zymotic death rate was, with the exception of that for the year 1902, the lowest of which there is any record in this district.

One case of Small-pox occurred during the year. By prompt removal of the patient to hospital, by vaccination of all contacts and by efficient disinfection all spread of the disease was prevented.

Measles was epidemic in the district during the first quarter of the year and cases of Scarlet fever were notified during every month with the exception of July and November; five deaths resulted from the first-named disease while all the Scarlet fever patients recovered.

Only nine cases of Diphtheria and Membranous croup occurred, one death resulting. The disease was never epidemic, one, or at the most two cases occurred during the months of February, April, May, June, August and December.

The cases of Erysipelas were all of an isolated character, one case having been notified during each of the following months May, June, August, October and December.

Diarrhœa was epidemic in July, August and September, but only four deaths were ascribed to this disease.

Enteric fever never assumed an epidemic character, two cases appearing in each of the months February, May and September, and three in December; no deaths resulted.

Influenza was prevalent during the first and last quarters of the year and a few cases occurred in June.

Chicken-pox was prevalent during the second and fourth quarters.

Though the population of the North Ward is two and a half times that of the South Ward yet in nearly every case the incidence of infectious disease was not only relatively but numerically greater on the smaller than on the larger population.

A report, issued by the Property and Sanitation Committee of the county council in November, referring to the conditions of (1) Overcrowding and (2) Insanitary dwellings consequent upon overcrowding, indicated that one-roomed tenements occupied by more than two and by more than four persons had considerably decreased between the years 1891 and 1901, that two-roomed tenements occupied by more than four persons and three-roomed tenements occupied by more than six persons had slightly increased, and that but little overcrowding existed during 1905 either of houses on area or of inmates in houses. A few cases of the latter condition were discovered but they were being dealt with by the district council.

One case of privy accommodation being insufficient—both inadequate and unsatisfactory—existed in Smith's Buildings and another in

Middleton's Yard. It is most desirable that when the new water supply becomes available all privy ashpits should be replaced by w.c.'s.

Factories and Workshops.—The workshops on the register numbered fourteen. One hundred and six inspections were made of factories, workshops and workplaces; ten defects were found all of which were remedied.

Improvements.—The medical officer has in his annual and monthly reports frequently emphasised the necessity of a more abundant and more reliable water supply; during the year two important steps in the above direction were taken (*a*) the terms of purchase by the Blyth council of Lord Ridley's waterworks were determined and (*b*) an agreement was entered into with the Newcastle and Gateshead Water Co. for the latter to supply the district with water.

An improved supply of water was procured by the Seaton Delaval Coal Co. for Co-operative Terrace.

An inquiry was held by members of the county council in consequence of an application from the Blyth and Cowpen councils for amalgamation.

During the prevalence of Measles and Diarrhœa handbills were distributed detailing the precautions to be taken with a view of preventing the spread of these diseases and of minimising the danger of complications; and during July, August and September scavenging was carried out at shorter intervals and drains were flushed more frequently. During the prevalence of Diphtheria, Antitoxin serum was supplied by the council with markedly good results.

Some additional manholes and flushing chambers were placed in three of the sewers.

The medical officer and surveyor were empowered to prosecute in all cases of deliberate overcrowding.

Requirements.—The most urgent requirement of this district continued to be a more abundant supply of pure water for domestic purposes and a copious supply for flushing sewers and drains.

Facilities for isolating patients suffering from the ordinary infectious diseases and also for isolating Small-pox cases independently of the Port Sanitary Authority's hospital were also much needed. The Port Authority have the first claim on their hospital and, as has been pointed out in previous reports, one case of Small-pox would block the whole hospital against cases of any other description, either from the Port or from the neighbouring urban districts; and *vice versa* one patient suffering from a disease other than Small-pox would prevent the hospital from being available for a case of Small-pox even though the latter occurred within the jurisdiction of the Port Authority. The urban districts of Blyth and Cowpen and the Port Sanitary Authority should each possess facilities for isolating patients suffering either from Small-pox or from other infectious diseases, the Small-pox hospital being remote from the other and from dwelling-houses and public roads.

A steam disinfecter for infective bedding, clothing, etc., has long been a requirement of the three sanitary authorities just mentioned, and also a destructor for house and other refuse for the two urban districts. It is manifest that a combination between the three authorities for providing accommodation in the Port hospital for infectious diseases other than Small-pox, and for securing means for isolating Small-pox cases in another building suitably situated, would cause a great saving to each Authority, both in initial expense and in subsequent maintenance and upkeep. Similarly a steam disinfecter might be made to serve the same three authorities and a destructor the two urban districts.

All privy ashpits should be abolished and w.c.'s substituted.

* 12.43 if the deaths of nine non-residents occurring in the district be deducted and if two deaths of residents occurring outside the district be added.

COWPEN.

Medical Officer of Health, R. LAING, L.R.C.P., M.R.C.S., Eng.,
L.M., D.P.H.

Area, 1,752 acres; estimated population, 19,170; birth rate, 38.49; general death rate, 15.33; zymotic death rate, 2.39; infant mortality rate (per 1,000 births), 132.79; Phthisis death rate, 0.83; death rate from respiratory diseases, 2.45.

Of the above rates the birth rate and the respiratory death rate have increased by 1.82 and 0.52 respectively in comparison with the previous year, while the remaining rates have decreased as follows:—General death rate, 1.57; zymotic death rate, 0.27; infant mortality rate, 45.01; and Phthisis death rate, 0.47.

Seven hundred and thirty-eight births were registered during the year, and two hundred and ninety-four deaths; of the latter ninety-eight were of children under one year, and thirty-nine of persons sixty-five years and upwards.

One hundred and fifty-five cases of infectious disease were notified as follows:—Diphtheria 12, Membranous croup 1, Erysipelas 11, Scarlet fever 73, Typhus fever 2, Enteric fever 10, Continued fever 5, Puerperal fever 1, and Chicken-pox 40.

Forty-six deaths occurred from zymotic disease, viz:—Measles 24, Scarlet fever 3, Diphtheria and Membranous croup 2, Enteric fever 3, other Continued fever 1, and Diarrhœa 13.

Phthisis caused 16 deaths; respiratory diseases 47; heart diseases, 28; accidents, 13; and premature birth, 17.

The zymotic death rate for the whole district was the second highest recorded in either urban or rural districts. The general death rate varied as usual in the different sub-divisions of the district; thus, in the Bebside Colliery district it was 19.9 per 1,000; in Cowpen Quay and Crofton it was 18.7 and 18 per 1,000 respectively; in Hodgson's Mill and Cowpen Square the rate was 15.2; in the Kitty Brewster, Cowpen and New Town districts 14.77; in Waterloo 12.3; and in the district comprising Isabella Pit, Cowpen Colliery and Newsham Freeholds 10.6 per 1,000.

Similarly a greatly varying infant mortality rate was recorded in the different sub-divisions; thus, in Hodgson's Mill and Cowpen Square district it was 263.15 per 1,000 births; in Kitty Brewster, Cowpen and New Town 215.68; in Cowpen Quay 155.89; in Waterloo 118.91; in Bebside Colliery 95.23; in Crofton 88.88; and in Isabella Pit, Cowpen Colliery and Newsham Freeholds district 80.35 per 1,000 births.

The zymotic death rate was in the different sub-divisions as follows:—in Kitty Brewster, Cowpen and New Town 4.54 per 1,000; in Bebside Colliery 4.1; in Crofton 2.71; in Waterloo 2.31; in Cowpen Quay 1.76; in Isabella Pit, Cowpen Colliery and Newsham Freeholds 1.52, and in Hodgson's Mill and Cowpen Square 1.36 per 1,000 population. It will be noticed therefore that the highest general death rate and the second highest zymotic death rate are recorded in the Bebside Colliery district; that in the Hodgson's Mill and Cowpen Square divisions the highest infant mortality and the lowest zymotic death rate are recorded; that the zymotic death rate was highest in the Kitty Brewster Cowpen and New Town district, and in this district the infant mortality rate was the second highest; in Cowpen Quay the general death rate was the second highest and the infant mortality rate the third highest, but it must be noted that in this division the birth rate was the highest, which would no doubt exert an influence on the infant mortality rate and consequently on the general death rate; it is also worthy of note that in Waterloo and Cowpen Quay, with practically the same populations, the deaths under one year were nearly twice as many in the latter division as in the former.

The district was free from Small-pox during the year, but two cases of Typhus fever occurred in Cowpen Quay, and of the other notifiable diseases Scarlet fever furnished the greatest number of cases (73), the disease occurring during every month of the year and in all the subdivisions, with the exception of Hodgson's Mill, etc., district.

Measles was prevalent during the first four months of the year and caused twenty-four deaths. Since, with one exception, all the deaths took place below the age of five years, the medical officer is furnished with an opportunity of again alluding to the folly of children below this age attending school.

When writing upon the deaths from Phthisis the medical officer emphasises the necessity for freer ventilation in houses; the difficulty of securing this when "windows won't open and chimneys are closed up"; the folly of thinking outside night air worse than the foul inside night air of a closed and badly ventilated house; the good results, educational and otherwise, arising from Sanatoria for consumptives and from the visits of health visitors and district nurses; the necessity of suppressing the filthy, disgusting and dangerous habit of indiscriminate expectoration by framing and enforcing a bye-law; he also advocates making Phthisis notifiable, in order that instruction may be given and precautions taken in as early a stage of the disease as possible. The medical officer traces the progress and spread of this disease from birth, through the cradle and juvenile tobacco smoking to the grave, the patient leaving behind him his legacy of most free and indiscriminate expectoration, laden with disease producing germs. "Danger begins at birth, through being nursed by a consumptive mother or through being fed with milk from a consumptive cow. Cow's milk is easily made sterile by boiling or pasteurising. The latter process is the best and consists in heating the milk to 167° for twenty minutes. Mother's milk is best, cow's milk ranks second in quality; condensed milk is inferior to both and infants' foods are worst. Condensed milk contains much sugar thereby attracting flies, which, fresh from dung heaps, pollute the milk and cause summer diarrhœa and, possibly, Enteric fever. Flies can be excluded by the use of gauze covered vessels.

"A danger to infants which I have not seen commented upon is the old fashioned wooden cradle. This curiosity in obsolete hygienic methods is often handed down as an heirloom, the possessors boasting of its interesting associations with previous generations. The history of the recent death of an occupant of this form of cradle from Tuberculosis can quite frequently be elicited from the parents, though the total number of babies who have infected it with infectious and filthy diseases, remains an unknown quantity, but has usually assisted in increasing the numerical difference between the thirteen less or more that have been cradled in it, and the five less or more now living. Other objectionable features are its closeness, and in winter its low position among the icy draughts of the ground floor. If one of the 'five less or more' is a male, he in a few years acquires the habit of smoking, which prevents the growth of his lungs, and if consumptive, he also expectorates freely, the expectoration which is full of infection thus further spreading the disease."

Factory and Workshop Act.—Twenty-nine factories and workshops were on the register necessitating many visits of inspection and supervision; only one defect was detected and remedied.

From a report issued in November by the Property and Sanitation Committee of the county council, it appears that, though the number of one-roomed tenements occupied by more than two and by more than four persons had slightly decreased between the years 1891 and 1901, yet a considerable number still remained, and the number of two-roomed tenements occupied by more than four persons and of three-roomed tenements occupied by more than six persons had increased.

The report also showed that both in Cowpen Quay and Newsham Freeholds a certain number of "Obstructive Buildings" existed, that in the above-named localities and also in Kitty Brewster are to be found houses most inadequately ventilated; that at Bebside Furnace and Newsham Freeholds a few cases occurred of overcrowding in houses, and that at Kitty Brewster, Bebside Furnace and Newsham Freeholds there were to be found a considerable number of dwelling houses which, from various causes enumerated in the report, come under the head of "insanitary dwellings."

Improvements.—Nearly fifty houses were completed and plans passed for one hundred and thirty. An additional water main was laid to Newsham, and over two thousand yards of water main with fire hydrants and sluice valves in various parts of the district. More than three hundred yards of front streets and nearly eight hundred yards of back streets were made up, besides over five hundred yards of kerbed and asphalted footpaths. Considerable extensions and improvements in sewerage, drainage and lighting were effected.

Requirements.—An abundant and dependable supply of pure water, on the constant system, continued to be the chief requirement of this populous district. The supply during the year was abundant, but the great bulk of the water was drawn from the mines. Water from such a source always possesses the drawbacks of being liable to unexpected pollution and of suddenly becoming "rusty" and unfit for domestic use. Since this council commenced to derive most of their domestic water supply from the mines they have experienced the first-named drawback and numbers of instances have occurred elsewhere of pit water becoming unusable owing to its rustiness. If the present sources, pit, surface and (to a very small extent) springs are retained, an additional area of sand filters should be provided and also a reservoir for filtered water.

Either the abolition of all one-roomed tenements or a strict supervision so as to obviate the conditions of overcrowding, which, during the year existed in many of these as well as in tenements of two rooms. The removal of obstructive buildings in Cowpen Quay and Newsham Freeholds and many alterations in Kitty Brewster, Bebside Furnace, Newsham Freeholds, Cowpen Quay, with a view of procuring better ventilation in, and improved sanitary conditions around, the houses.

Accommodation for isolating patients suffering from the ordinary infectious diseases and especially Small-pox cases, independently of the Blyth Port Sanitary Authority's hospital, was also much needed. The Port Authority have the first claim on their hospital and, as has been pointed out in previous reports, one case of Small-pox would block the whole hospital against cases of any other description, either from the Port or from the neighbouring urban districts; and, *vice versa*, one patient suffering from a disease other than Small-pox would prevent the hospital from being available for a case of Small-pox, even though the latter occurred within the jurisdiction of the Port Authority. The urban districts of Blyth and Cowpen and the Port Sanitary Authority should each possess facilities for isolating patients suffering either from Small-pox or from other infectious disease, the Small-pox hospital being remote from the other and also from dwelling houses and public roads.

A steam disinfecter, for infective bedding, clothing, etc., has long been a requirement of the three sanitary authorities just mentioned, and also a destructor for house and other refuse for the two urban districts. It is manifest that a combination between the three authorities for providing accommodation in the Port hospital for infectious diseases other than Small-pox, and for securing means for isolating Small-pox cases in another building suitably situated, would cause a great saving to each Authority, both in initial expense and in subsequent maintenance and upkeep. Similarly a steam disinfecter might be made to serve the same three authorities and a destructor the two urban districts.

The medical officer again alludes to the desirability of providing public slaughter houses, without which thorough inspection of meat is almost impossible.

All privy ashpits should be abolished.

CRAMLINGTON.

Medical Officer of Health, R. ANDERSON, M.D.

Area, 3.583 acres; estimated population, 6,680; birth rate, 33.08; general death rate, 20.2; zymotic death rate, 1.94; infant mortality rate (per 1,000 births), 199.0; Phthisis death rate, 1.19; death rate from respiratory diseases, 6.58.

Of the above rates the birth rate and the zymotic death rate have decreased by 3.4 and 0.77 respectively, while the remaining rates have increased as follows:—General death rate, 3.76; infant mortality rate, 36.84; Phthisis death rate, 0.44; and the respiratory death rate, 3.57.

Two hundred and one births were registered during the year, and one hundred and thirty-five deaths; of the latter forty were of children under one year, and twenty-eight of persons sixty-five years and upwards.

Forty-two cases of infectious disease were notified as follows:—Diphtheria 7, Erysipelas 9, Scarlet fever 25, and Enteric fever 1.

Thirteen deaths occurred from zymotic disease, viz:—Measles 7, Scarlet fever 1, Diphtheria and Membranous croup 3, Enteric fever 1, and Diarrhœa 1.

Phthisis caused 8 deaths; respiratory diseases, 44; heart diseases, 10; accidents, 5; and premature birth, 19.

It is much to be regretted that the reduction in all the mortality rates in 1904 was not maintained during 1905, but that on the contrary during the latter year, with the exception of a slight reduction in the zymotic death rate, the mortality from every cause was higher than during the previous year; especially was this the case as regards the infant mortality rate which was 36 per 1,000 births in excess of the rate for the year 1904, 25 above the average for the last ten years and was, as was also the general death rate, the highest recorded in the county.

The deaths attributed to premature birth (19) out of a total of two hundred and one births was excessively high and the deaths from Atrophy, Bronchitis and Pneumonia (23) suggest the probability of a considerable amount of ignorance concerning the feeding and management of infants. On the other hand the cases of infectious disease notified numbered during 1905 but little more than half those obtaining for the previous year and the deaths from these diseases were fewer in number.

The district was entirely free from Small-pox also from Puerperal fever, and only one case of Enteric fever was notified.

A severe epidemic of Measles occurred in Cramlington village and East Cramlington, necessitating school closure at the latter place for nearly a month during January and February.

Scarlet fever was prevalent during the months of January, February, March, April, September and November.

With the exception of Shankhouse and Cramlington the district was free from Diphtheria.

The deaths from infectious disease were few, about two-thirds of the number recorded in the previous year, but the zymotic death rate was the third highest recorded in the county.

Factories and Workshops.—No mention is made in the report of the number of factories and workshops in the district. It is therefore to be inferred that no register has been kept, which is a contravention of the Factory and Workshop Act, 1901, sec. 131.

A report issued by the Property and Sanitation Committee of the county council, referring to the conditions of (1) Overcrowding and (2) Insanitary dwellings consequent upon overcrowding, indicated that although between the years 1891 and 1901 the number of one-roomed tenements occupied by more than two and more than four persons and also the number of two-roomed tenements occupied by more than four persons had decreased, yet the number of three-roomed tenements occupied by more than six persons had increased; also that several houses were built back to back at East and West Cramlington; that at the Freeholds, West Cramlington, a good deal of very dilapidated and insanitary property existed, in many instances overcrowded by whole families having only one room each, the number of inmates in each room ranging from two or three up to six, seven and ten. A one-roomed tenement in Edgar's Buildings, Shankhouse, was overcrowded by eleven inmates.

Improvements.—In consequence of an agreement having been made with the Tynemouth council to supply this district with water at 4d. per 1,000 gallons an improved water supply was in prospect.

Scavenging operations were carried out with greater thoroughness and at shorter intervals than previously which conduced to better sanitary conditions.

The council determined to carry out an improved sewage disposal scheme at East Cramlington with a view of obviating the pollution of Seaton Burn by very partially treated sewage from a large and populous district and also to adopt measures for discharging a satisfactory sewage effluent into Horton Burn.

The medical officer's report was printed.

The desirability of having bye-laws was considered by the council.

Requirements.—As in former years so up to the end of the year under consideration the water supply was chiefly derived from the mines and a more satisfactory supply was much needed.

Sewage disposal schemes were needed to prevent the pollution of Seaton Burn and Horton Burn.

The conditions indicated by the above-mentioned report of the Property and Sanitation Committee of the county council needed considerable amelioration and emphasised the necessity of this urban district council framing bye-laws.

EARSDON.

Medical Officer of Health, TAYLOR DIXON, M.B., B.S.

Area, 4,705 acres; estimated population, 9,530; birth rate, 35.88; general death rate, *16.68; zymotic death rate, 1.67; infant mortality rate (per 1,000 births), 181.28; Phthisis death rate, 1.15; death rate from respiratory diseases, 2.93.

Of the above rates the Phthisis death rate and the respiratory death rate have increased by 0.09 and 1.55 respectively, as compared with the previous year, while the remainder of the rates have decreased as follows:—Birth rate, 3.8; general death rate, 1.83; zymotic death rate, 1.3; and the infant mortality rate, 22.47.

The infant mortality rate was the third highest recorded in the county.

Three hundred and forty-two births were registered during the year, and one hundred and fifty-nine deaths; of the latter sixty-two were of children under one year, and thirty-six of persons sixty-five years and upwards.

Fifty-five cases of infectious disease were notified as follows:—Small-pox 9, Diphtheria 1, Erysipelas 25, Scarlet fever 15, Enteric fever 3, Continued fever 1, and Puerperal fever 1.

Sixteen deaths occurred from zymotic disease, viz:—Measles 5, Whooping cough 3, and Diarrhœa 8.

Phthisis caused 11 deaths; respiratory diseases, 28; heart diseases, 13; accidents, 6; and premature birth, 7.

The medical officer provides in addition to the tables requested by the Local Government Board others which give valuable and interesting statistical information relating to the sub-divisions of this urban district; thus,

Districts.	Popu- lation.	Births.		Deaths.		Deaths under one year per 1,000 births.		Zymotic deaths.	
		No.	Rate.	No.	Rate.	No.	Rate.	No.	Rate.
Earsdon ...	3,077	139	45·1	62	20·14	27	194·2	5	1·6
Backworth ...	2,178	48	22·0	20	9·18	6	125·0	0	0·0
Holywell ...	3,260	100	30·6	51	15·6	13	130·0	8	2·45
Murton ...	1,015	55	54·1	29	28·5	16	290·9	3	2·95
Whole district ...	9,530	342	35·88	162	16·99	62	181·28	16	1·67

From the above table it appears that the birth rate was abnormally high in the Murton and low in the Backworth divisions, Earsdon and Holywell having respectively the second and third highest rates; also that the sub-divisions of the district are in precisely the same order as regards the general death rate and the infant mortality rate.

The following table shows for each sub-district the number of deaths for each quarter of the year and also for the different age periods:—

Townships.	First Quarter.	Second Quarter.	Third Quarter.	Fourth Quarter.	Total.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.
Earsdon ...	22	14	9	17	62	27	8	4	1	12	10
Backworth ...	3	2	8	7	20	6	—	—	—	7	7
Holywell ...	20	9	13	9	51	13	11	1	1	13	12
Murton ...	7	6	6	10	29	16	4	1	—	1	7
Whole district ...	52	31	36	43	162	62	23	6	2	33	36

The cases of infectious disease notified were considerably fewer than during the previous year.

Scarlet fever was never epidemic; four cases occurred in January and in no other month were more than two cases notified. It is most satisfactory to note the almost total absence of Diphtheria (1 case), Enteric fever (4 cases) and Puerperal fever (1 case).

Factory and Workshop Act.—The factories numbered two and the workshops nine; sixty-one visits of inspection were paid; two defects were found both of which were remedied.

In November, 1905, the Property and Sanitation Committee of the county council issued a report referring to the condition of (1) Overcrowding and (2) Insanitary dwellings consequent upon overcrowding.

It appeared from the above report that a considerable amount of Overcrowding in houses existed in several parts of this district and that in many cases the evil was accentuated by the houses being built back to back or, if not erected according to this plan, yet having no through ventilation. Instances of the first-named conditions were given under "overcrowding of houses on land," and houses built according to the second plan were found at Earsdon Village, East Holywell Colliery, Murton, New York and Holywell Village.

Improvements.—A greatly improved water supply all over the district, mainly due to the agreement entered into between the council and the Newcastle and Gateshead Water Co. and also in consequence of extensions of water mains and of additional standpipes. Owing to the above alterations a supply on the constant system was secured for Backworth and New York. Lighting by electric lamps of the main roads at Earsdon, Backworth, Earsdon Square, New Backworth and East and West Holywell, and of those of Murton by gas.

Plans were approved for ten new houses.

Some of the streets at Backworth were put into proper order by the Coal Company. Considerable improvements were effected by relaying sewers at Holywell, Earsdon and Earsdon Road, and additional ventilating shafts were erected.

Several cases of overcrowding were dealt with by the council.

Requirements.—Measures for effectually dealing with the long standing and disgraceful nuisance caused by the sewage farm at Earsdon, also for producing a satisfactory sewage effluent at Holywell irrigation ground. A large number of privy ash pits are bad in construction, huge in size and uncovered; these defects should be remedied.

Scavenging should be carried out by the district council, under which system the work can be done more efficiently, more economically and with less friction.

A steam disinfecter for use at the isolation hospital was a distinct requirement.

A refuse destructor seems to be required to meet the difficulty in procuring tips for refuse.

Alterations to many old houses were required, several being unfit for human habitation, others being damp, dark, ill-ventilated and drained in an unsatisfactory manner.

A great number of roads and footpaths for colliery rows were in a most dilapidated and insanitary condition.

Some cases of overcrowding still required to be dealt with.

* 16.99 if one death of a non-resident occurring in the district be deducted and if the deaths of four residents occurring outside the district be added.

GOSFORTH.

Medical Officer of Health, W. GALBRAITH, L.R.C.P., L.R.C.S.

Area, 1,303 acres; estimated population, 12,000; birth rate, 27.25; general death rate, *23.16; zymotic death rate, 1.16; infant mortality rate (per 1,000 births), 146.78; Phthisis death rate, 1.25; death rate from respiratory diseases, 1.41.

Of the above rates the general death rate, the Phthisis death rate, and the respiratory death rate have increased by 0.51, 0.89 and 0.05 respectively; the remaining rates have decreased as follows:—Birth rate, 5.2; zymotic death rate, 1.02; and the infant mortality rate, 12.88.

Three hundred and twenty-seven births were registered during the year, and two hundred and seventy-eight deaths; of the latter one hundred and seventeen were of non-residents occurring in public institutions in the district, leaving one hundred and sixty-one on which the corrected death rate is calculated. Forty-eight deaths were of children under one year, and thirty-four of persons sixty-five years and upwards.

Ninety-one cases of infectious disease were notified as follows:—Small-pox 6, Diphtheria 12, Erysipelas 5, Scarlet fever 58, Enteric fever 9, and Puerperal fever 1.

Fourteen deaths occurred from zymotic disease, viz:—Measles 2, Whooping cough 1, Diphtheria and Membranous croup 3, and Diarrhœa 8.

Phthisis caused 15 deaths; respiratory diseases, 17; heart diseases, 11; accidents, 3; and premature birth, 4.

To the decline in the birth rate so noticeable throughout the county generally there is no exception in Gosforth, the *actual number* of births having fallen in this rapidly increasing district from three hundred and fifty-seven in 1904 to three hundred and twenty-seven in 1905.

The population was estimated to have increased by one thousand during the past twelve months. The medical officer gave statistics of deaths at various age periods which occurred during 1904 and 1903 as well as during the year under consideration, from which it appears that the death rate under twelve months per 1,000 births in 1903 was 130.43; in 1904, 159.66; and in 1905, 146.78. The medical officer refers to deaths from Diarrhœa among infants as follows: "I note that there was no decline in the number of deaths from summeraic Diarrhœa, 12 occurring in each of the years 1905 and 1904. It is deplorable that, in an urban district such as Gosforth—notwithstanding all the educational advantages of the age and the greatly improved conditions of sanitation—there exists such a colossal ignorance of domestic hygiene as undoubtedly does exist in regard to the feeding and rearing of children." The medical officer also drew attention to the comparative immunity from Phthisis which the district of Coxlodge had enjoyed, only three deaths having occurred from this cause during the years 1902-05 inclusive; and on the contrary in the district of East Gosforth five deaths resulted from Phthisis during 1905, but this sub-division was almost entirely free from deaths usually included under the head of zymotic diseases. The death rate from Phthisis and other diseases of the respiratory organs for the whole district indicates a considerable rise as compared with the previous year.

Besides six cases of Small-pox which occurred during the months of January and February and were the legacy of the outbreak during 1904, cases of Scarlet fever were notified during every month of the year except June and July, the disease being especially prevalent during the last four months of the year.

Nine cases of Enteric fever were notified during the months of February, July, August, September, October and November, the disease was for the most part confined to the poorest and most crowded localities. Twelve cases of Diphtheria were spread over the first four months and the sixth, eighth and eleventh months of the year. Eight of these occurred in children under five years of age, which fact serves to indicate one of the dangers of school attendance at this age period.

An epidemic of Measles occurred in December among children attending the Coxlodge schools.

Factory and Workshop Act.—Fourteen workshops were reported to be on the register, all of which were frequently visited, and no sanitary defects were found.

Improvements.—More than one hundred and twenty houses were completed and others were in course of construction during the year.

A considerable number of insanitary privy ashpits were abolished.

A new drainage scheme for practically the whole district was prepared, and the sanction of the Local Government Board to borrow the necessary money and carry out the scheme was applied for.

The Gosforth, Newburn and Castle Ward joint hospital was completed and opened.

Requirements.—Measures should be adopted for obviating the continued pollution of the Ouseburn near the Three Mile Bridge reported by the county medical officer in November, 1904. The medical officer's annual report should be printed. To compel a busy medical practitioner to write an annual report which can only be considered by those members of the council who happen to be in attendance when the report is presented, and cannot be seen by the rest of the ratepayers suggests the idea that the council do not wish their medical officer's annual report to be read by the public. The cost of printing being only a few shillings, economy can hardly be the motive which influences this council in persistently refusing to print the medical officer's annual report.

Owing to the difficulty experienced in procuring satisfactory tips for refuse a destructor appears to be a necessity for this district.

The medical officer advises that Phthisis should be made notifiable, also that a steam disinfecter should be procured, and that a sanatorium should be provided locally for the isolation, education and treatment of some of the persons suffering from Phthisis.

* 13.41 if the deaths of 117 non-residents occurring in the district be deducted.

HEXHAM.

Medical Officer of Health, D. JACKSON, M.D.

Area, 5.149 acres; estimated population, 8,000; birth rate, 27.0; general death rate, *15.62; zymotic death rate, 0.75; infant mortality rate (per 1,000 births), 134.25; Phthisis death rate, 1.0; death rate from respiratory diseases, 2.37.

Of the above rates the birth rate and the respiratory death rate have increased by 0.13 and 0.37 respectively; the remainder of the rates have decreased as follows:—General death rate, 4.38; zymotic death rate, 1.62; infant mortality rate, 9.93; and Phthisis death rate, 2.0.

Two hundred and sixteen births were registered during the year, and one hundred and twenty-five deaths; of the latter twenty-nine were of children under one year, and forty-five of persons sixty-five years and upwards.

Twenty-five cases of infectious disease were notified as follows:—Diphtheria 3, Membranous croup 1, Erysipelas 2, Scarlet fever 14, Enteric fever 1, Whooping cough 2, and Measles 2.

Six deaths occurred from zymotic disease, all being cases of Diarrhœa.

Phthisis caused 8 deaths; respiratory diseases, 19; heart diseases, 26; accidents, 3; and premature birth, 3.

The general death rate was the lowest ever recorded in this district. The district was wonderfully free from infectious diseases, only twenty-five cases in all having been notified. Of the diseases generally notifiable only twenty-one cases occurred:—Scarlet fever 14, Diphtheria and Membranous croup 4, Enteric fever 1, and Erysipelas 2.

A report issued in November, 1905, by the Property and Sanitation Committee of the county council on (1) Overcrowding and (2) Insanitary dwellings consequent upon overcrowding, indicated that there had been in this district a considerable reduction during recent years in the

number of one-roomed tenements occupied by more than two and by more than four persons, but that the number of three-roomed tenements occupied by more than six persons had increased. The report also showed that in certain localities—The Mystery, Jacob's Ladder, Giles-gate, Batey's Cottages, Bell's Court (or Close), Commercial Place, Giles-gate Buildings—insanitary conditions existed, *e.g.*, obstructive buildings causing free circulation of air and admission of sunlight to be impossible; houses let to several families with one entrance common to all; several instances of tenements overcrowded by inmates and instances of stables built on to the wall of a dwelling house.

A special report by the district medical officer not only confirmed the description alluded to above but showed that it was to some extent understated.

Improvements.—A few new houses were built. A great improvement was effected in the condition of many of the private streets; considerable extensions of water mains and laying or relaying of sewers and drains were effected. Very considerable progress was made with the new sewage disposal works.

Requirements.—The chief requirements of this district up to the end of the year appeared to be energetic action directed toward the reconstruction, repair or removal, of dilapidated property, instances of which existed in Giles-gate and Giles-gate Bank; the Turk's Head Yard and the Box Iron in Haugh Lane, Hall Stile Bank, at the rear of Jubilee Buildings and in other situations.

The paving or cementing of yards in Giles-gate, Priestpapple, East-gate, Bell's Court, Argyle Terrace East, at the George & Dragon Inn, and other property in Back Street, in Dean Street, Back Row, Foundry Cottages, Hebron Terrace, Commercial Place, and in other situations.

The removal of wooden erections from backyards in some of which fowls, pigeons, etc., were kept under most undesirable conditions. Examples of the above structures existed in Argyle Terrace East, Wilfred's Road, Pearson's Terrace, and other localities.

The provision of w.c. accommodation in localities where it is either entirely absent or insufficient.

Measures to be adopted for dealing with overcrowding in Giles-gate, Eastgate, Holy Island, The Mystery, etc.

Completion of the sewage disposal works.

Removal of the cattle market to a more suitable locality.

The provision of a hospital in which to isolate Small-pox patients, at a greater distance from the hospital for infectious diseases other than Small-pox, and from the Workhouse.

A steam disinfecter.

* 14·12 if the deaths of twelve non-residents occurring in the district be deducted.

NEWBIGGIN-BY-THE-SEA.

Medical Officer of Health, VINCENT BURROW, M.D., B.S.,
M.R.C.S., Eng., L.R.C.P. (Lond.)

Area, 351 acres; estimated population, 2,530; birth rate, 34.38; general death rate, *17.39; zymotic death rate, 1.18; infant mortality rate (per 1,000 births), 160.91; Phthisis death rate, 1.97; death rate from respiratory diseases, 2.37.

Of the above rates the infant mortality rate, the Phthisis death rate and the respiratory death rate have increased by 33.01, 0.34 and 1.15 respectively; the remainder of the rates decreased as follows:—Birth rate, 0.72; general death rate, 5.02; and zymotic death rate, 0.04.

Eighty-seven births were registered during the year, and forty-four deaths; of the latter fourteen were of children under one year, and four of persons sixty-five years and upwards.

Thirty-eight cases of infectious disease were notified as follows:—Diphtheria 1, Erysipelas 1, and Scarlet fever 36.

Three deaths occurred from zymotic disease, viz:—Scarlet fever 1, and Diarrhœa 2.

Phthisis caused 5 deaths; respiratory diseases, 6; heart diseases, 3; accidents, 2; and premature birth, 1.

The Phthisis death rate was the highest recorded in the Administrative County.

Infectious diseases were again almost entirely represented by Scarlet fever in addition to which only two other cases were notified, viz., one each of Diphtheria and Erysipelas. Scarlet fever cases were notified during the months of February, June, August, September, October, November and December.

Factory and Workshop Act.—The workshops numbered about eight, but no register appears to have been kept which as I pointed out in my annual report for 1904 is an infringement of Section 131 of the Act. Twelve visits of inspection were paid; one defect was found and remedied.

A report issued by the Property and Sanitation Committee of the county council showed that between the years 1891 and 1901 the one-roomed tenements occupied by more than two persons and by more than four persons and two-roomed tenements occupied by more than six persons had decreased, and that the three-roomed tenements occupied by more than six persons had slightly increased. The report also showed that while no cases of overcrowding of houses by inmates were met with at the particular time at which the investigations were made, a considerable number of houses were to be found too closely aggregated, with, in some cases, no through ventilation and having no access provided for cart for scavenging purposes. In addition, the privy accommodation was in many cases disgraceful, five houses having neither privies nor ashpits; one privy ashpit provided for three families being built on to a house, another being built on to a shop; another most insanitary ashpit provided for three families received roof water from adjoining buildings, the contents of two others were wheeled out through a narrow covered passage over which was a dwelling-room and in two instances the contents had to be carried through houses; also about forty houses had no through ventilation.

Improvements.—Several new houses were occupied (17 since Midsummer 1904) eight of which have a private water supply.

Improvements were effected to the roads surface in High Street and Marine Terrace and the necessity for carrying the contents of ashpits through two houses was obviated. The work of framing a fresh set of bye-laws was commenced.

Requirements.—No considerable development in building operations can take place and no great improvement in general sanitation can be effected until steps are taken for procuring an abundant supply of pure water distributed all over the district. A few private wells are available and a few houses on the Milburn estate have a private supply, but practically 2,500 and during the season 3,000 people are dependent upon three wells; the water in which is liable to pollution and the pumping arrangements of which are liable to go wrong. Practically all water for any purpose is carried from these wells and in many cases for a considerable distance. It is needless to say that under these circumstances a quantity of water very far short of all sanitary requirements is used for domestic purposes, for flushing of drains and sewers, and for cleansing of yards, stables, cowsheds, slaughter houses, etc.

Additional houses are required for the weekly wage class.

A steam disinfecter for use at the isolation hospitals was a distinct requirement.

When a better water supply is provided w.c.'s should be substituted for privy ashpits. Meanwhile ash closets should take the place of privy ashpits, the floor and sides being lined with good cement concrete.

Scavenging should be undertaken by the sanitary authority, complaints having been frequent from both residents and visitors of the nuisance arising from the slovenly scavenging of structurally insanitary receptacles.

A new code of bye-laws are urgently needed, most, if not all of those in force dating back to 1871, also regulations under the Dairies, Cowsheds and Milkshops Order should be framed and enforced and the Public Health Amendment Act, 1890, should be adopted.

A register of factories and workshops should be kept as required by the Factory and Workshop Act, 1901, Section 131.

* 16.2 if the deaths of three non-residents occurring in the district be deducted.

NEWBURN.

Medical Officer of Health, A. W. MESSER, M.B., C.M., B.Sc.

Area, 4,673 acres; estimated population, 14,312; birth rate, 38.35; general death rate, 17.67; zymotic death rate, 4.26; infant mortality rate (per 1,000 births), 191.25; Phthisis death rate, 1.32; death rate from respiratory diseases, 3.00.

Of the above rates the birth rate and the Phthisis death rate have decreased by 1.76 and 0.12 respectively; the remaining rates have increased as follows:—General death rate, 1.8; zymotic death rate, 1.81; infant mortality rate, 56.26; and the respiratory death rate, 0.05.

Five hundred and forty-nine births were registered during the year, and two hundred and fifty-three deaths; of the latter one hundred and five were of children under one year, and thirty-one of persons sixty-five years and upwards.

Eighty-seven cases of infectious disease were notified as follows:—Small-pox 1, Diphtheria 18, Membranous croup 1, Erysipelas 11, Scarlet fever 42, and Enteric fever 14.

Sixty-one deaths occurred from zymotic disease, viz:—Measles 8, Scarlet fever 2, Whooping cough 4, Diphtheria and Membranous croup 3, Enteric fever 3, and Diarrhœa 41.

Phthisis caused 19 deaths; respiratory diseases, 43; heart diseases, 12; accidents, 6; and premature birth, 12.

The birth rate remained particularly high, being 38.35 per 1,000 of the population; in 1904 the rate was 40.62; in 1903, 41.47; in 1902, 38.6; and in 1901, 38.04. This was considerably above the county rate which was 32.89, and also above the rate for England and Wales which was 27.2. The general death rate was the highest recorded during the past ten years and was also the third highest in the county.

In four sub-districts—Newburn, Newburn Hall and Sugley, Walbottle and East and West Denton—the general death rate was higher than in 1904, and the medical officer remarks: “The causes of the high death rate in these different localities I have reported on at length before, and more particularly in the report on housing, and I only add that again this year there is substantial corroboration of my previous contention that a great deal of it is due to damp, ill-ventilated and dilapidated dwellings with overcrowding, and so long as these are allowed to exist, will the death rates be correspondingly high. But the death rate is not by any means an accurate gauge of the loss to

“the community; for one man dead you have many ill, so that if by any means you can lower the death rate you have not only fewer deathbeds but fewer sickbeds; not only fewer funerals but much less expenditure on the sick. The sick man made well is not only restored to the producers but he is taken from the ranks of those who have to be maintained.”

The infant mortality rate was also higher by fifty-six per 1,000 births than during the previous year, and by sixty-three as compared with the rate for England and Wales; it was fifty-seven per 1,000 births higher than the county average and the second highest rate recorded in the county. The medical officer attributed the very high infant mortality to dirt, want of ventilation, drink and consequent poverty.

The zymotic death rate was again high, nearly twice as high as during 1904, more than twice the rate obtaining for England and Wales, and the highest rate from this class of disease recorded in the county. The medical officer made a house to house inspection of his district during the autumn, and remarks that he has nothing to add to his report presented in November “except to emphasise the fact that very many, considerably more than half, of the infants are fed improperly, and in many instances their surroundings are distinctly bad.”

Besides outbreaks of Measles and Whooping-cough, the former in February and the latter in November, the principal infectious diseases present in the district were Enteric fever during every month except February, March, May and July; Diphtheria during every month except September, November and December, and Scarlet fever in every month except April.

The mortality from Phthisis and from respiratory diseases has a tendency to increase year by year in this district and the medical officer indicates that “the means for combating these diseases are to be found in abolishing dark, damp, ill-ventilated and dingy tenements which never catch a ray of sunshine and which provide the most favourable conditions for the development and spread of diseases of the above types.”

Factory and Workshop Act.—The factories number two, the workshops thirteen and workplaces four. Ten visits of inspection were paid and no defects were found.

From a report issued in November by the Property and Sanitation Committee of the county council, it appeared that many instances were to be found of Overcrowding of houses on land, of Obstructive buildings, of Overcrowding in houses and of Insanitary dwellings. There were rows of houses built back to back, this arrangement interfering with the proper circulation of air and with the admission of sunlight; also blocks of property built back to back or back to end and let in tenements, each family occupying one, or in some cases two rooms, one entrance and staircase being provided for all the tenants in common.

Many instances of overcrowding in houses were given in several different parts of the district, the particulars of which—absence of air space and of means for securing ventilation, as well as the herding together of persons of both sexes and of all ages, sometimes with a lodger thrown in—can only be described as morally and physically unhealthy and revolting.

Under the head of Insanitary Dwellings instances were given in fifteen localities of houses possessing one or more of the undermentioned drawbacks rendering them in some cases unfit for human habitation—defective roofs, damp walls, bad floors, absence of, or defective drainage, inadequate ventilation, entire absence of, or insufficient privy accommodation, some of the houses being structurally dangerous and some having under the floors faulty drains through which rats gained access to the dwelling rooms, others were built into the ground as regards one of their sides.

Improvements.—A most excellent hospital for the Newburn and Gosforth district and a portion of the Castle Ward rural district was completed during the year and opened in September. From the Newburn urban district twenty-seven patients suffering from Scarlet fever, Diphtheria and Enteric fever were treated in hospital up to the end of the year.

Requirements.—Increased house accommodation and the closing of many houses unfit for human habitation. Improvement in the drainage and privy accommodation in several localities, one or other of which were entirely absent in a considerable number of instances. At least one example was found of a one-roomed tenement with neither drain, privy, nor through ventilation.

Greatly improved ventilation in a large number of houses, especially in Old Newburn, North Walbottle, Throckley, Denton Burn, Walbottle Old Row, Carr's Row, Sugley Buildings and the Old Brewery Houses; Lemington High Row, Denton Lodge and Denton Square, Walbottle Village, Low Lemington, Low Row, Victoria and Albert Terrace and Northumberland Terrace, Newburn, the High Square Walbottle Village, the Winnings, Walbottle; the Pumping Engine, Montague Colliery; at Waterside and the Tile Sheds, Bell's Close.

The conversion of many unceiled, low, dark attics, perfectly unfit to be used as sleeping rooms, into decent, habitable bedrooms. Houses of this description abound in the district at Denton Burn, Denton Square, Walbottle Village, Walbottle Old Row, Walbottle High Square and other places.

Some of the worst and most insanitary property is to be found at Manor Buildings and Water Row, Newburn; the Winnings, Walbottle; Bell's Close and the Tile Sheds, Bell's Close; Waterside, Bell's Close; at The Old Brewery Houses, Low Lemington; also some houses by the Wagonway Side, and at Sugley Row, Lemington; Carr's Row, and one house in Carr's Cottages, Scotswood.

In addition to the above requirements may be mentioned the abolition of many most insanitary privy ashpits and the adoption of a bye-law making the provision of w.c.'s compulsory in all new or re-built property.

In face of the conditions of housing and living alluded to above the medical officer's suggestion that a Lady Health Visitor should be appointed appears particularly worthy of consideration.

It will be noticed that in this district there is a combination of most insanitary and morally and physically unhealthy conditions, also that the general death rate was last year the highest recorded for ten years; that the infant mortality rate was considerably higher than during the previous year, also higher than the rate for England and Wales and higher than the county average; also that the zymotic death rate was higher in this district than in any other district in the county, more than twice as high as the rate for England and Wales, and nearly twice as high as it was in the previous year for this district.

For years the conditions described above have existed uninterruptedly and with an ever increasing tendency to become accentuated. The district council have the power, but apparently have not the inclination, to compel an amelioration of the disgraceful conditions described in the reports of the district medical officer and of the Property and Sanitation Committee, and it is lamentable to have to admit that beyond the completion and opening of the hospital there are no other improvements to record.

ROTHBURY.

Medical Officer of Health, F. BARROW, M.R.C.S., L.S.A.

Area, 970 acres; estimated population, 1,330; birth rate, 21.05; general death rate, 13.53; zymotic death rate, nil; infant mortality rate (per 1,000 births), 107.14; Phthisis death rate, nil; death rate from respiratory diseases, 2.25.

With the exception of the birth rate and the respiratory death rate, which have increased by 4.39 and 0.74 respectively, all the above rates have decreased as follows:—General death rate, 4.65; zymotic death rate, 0.75; infant mortality rate, 29.22; and the Phthisis death rate, 1.51.

Twenty-eight births were registered during the year, and eighteen deaths; of the latter three were of children under one year, and seven of persons sixty-five years and upwards.

Four cases of infectious disease were notified as follows:—Erysipelas 3, and Scarlet fever 1.

No deaths occurred from zymotic disease.

Phthisis caused no deaths; respiratory diseases, 3; heart diseases, 7; accidents, 1; and premature birth, 1.

The population was estimated to have increased by ten.

The zymotic and Phthisis death rates were the lowest recorded in the county, there being no deaths from either of the above-named diseases, a remark which cannot be made in reference to any other district. The infant mortality rate was the third lowest and the birth rate was the second lowest in the county. The general death rate, though not by any means the lowest in the Administrative County, was the lowest recorded in this district since 1896 and about four per 1,000 below the average of the previous nine years.

Diseases of an infectious nature were singularly few, all the notifiable diseases being comprised by a solitary case of Scarlet fever and three cases of Erysipelas, while of non-notifiable diseases there appear to have been none.

Factory and Workshop Act.—No register seems to have been kept, which is a breach of the Factory and Workshop Act, 1901, Section 131.

The workshops were returned as about eight; the visits of inspection numbered three, and no defects were found.

The medical officer as usual gave a table indicating the rainfall registered during each month of the year, from which it appears that January with a rainfall of 0.57 inches was the driest month, and November the wettest, with a rainfall of 6.88 inches.

The rainfall for the year was 29.38 inches being 4.13 inches in excess of the previous year and about 4.6 inches below the average (34 inches) for this district.

Improvements.—With the exception of a new Post Office and Bank and the re-building of three dwelling houses no building operations were carried out during the year.

Water was laid on to the Workhouse and the latter brought into use.

The drainage of Blue House and the Railway Hotel was improved.

Since the spring of 1904 two steps in advance have been accomplished in relation to a sewerage and sewage disposal scheme—the actual scheme to be carried out has been selected and application has been made for a site for the sewage disposal works near Little Mill.

Requirements.—The carrying out of a sewerage and sewage disposal scheme.

SEGHILL.

Medical Officer of Health, R. ANDERSON, M.D.

Area, 1,425 acres; estimated population, 2,220; birth rate, 25.67; general death rate, 13.51; zymotic death rate, 0.45; infant mortality rate (per 1,000 births), 175.43; Phthisis death rate, 1.35; death rate from respiratory diseases, 1.35.

With the exception of the Phthisis death rate which has increased by 0.9, all the above rates have decreased as follows:—Birth rate, 8.11; general death rate, 3.15; zymotic death rate, 0.45; infant mortality rate, 24.57; and the respiratory death rate, 0.9.

Fifty-seven births were registered during the year, and thirty deaths; of the latter ten were of children under one year, and four of persons sixty-five years and upwards.

Five cases of infectious disease were notified as follows:—Diphtheria 3, Erysipelas 1, and Scarlet fever 1.

One death occurred from zymotic disease, viz., from Diphtheria.

Phthisis caused 3 deaths; respiratory diseases, 3; heart diseases, 1; accidents, 1; and premature birth, 7.

The population was estimated to have remained stationary since 1902 or about eighty less than the average for the years 1895-1900. As usual very few cases of zymotic disease occurred in this district, which was entirely free from Small-pox, Enteric and Puerperal fevers and there was a total absence of infectious disease in any epidemic form.

Factory and Workshop Act.—No mention was made in the medical officer's report of any factories or workshops; it is therefore to be inferred that no register is kept. Under Section 131 of the Factory and Workshop Act, 1901, it is the duty of every district council to keep a register of all workshops situate within their district.

A report issued in November by the Property and Sanitation Committee of the county council showed that during recent years the number of one-roomed tenements occupied by more than two and by more than four persons, also of two-roomed tenements occupied by more than four persons and of three-roomed tenements occupied by more than six persons had decreased, but that some dilapidated and insanitary dwellings were to be found, the above conditions being to a great extent, though not entirely, responsible for overcrowding in houses, several instances of the latter being mentioned.

Improvements.—The medical officer's report was printed.

Requirements.—Up to the end of the year no steps had been taken to treat the sewage from this district though the desirability of so doing was again brought to the council's notice.

A sewage disposal scheme is much needed so as to prevent the pollution of Seaton Burn.

A destructor for the disposal of house and other refuse would have a most beneficial effect on the salubrity of the district.

A steam disinfecter for use at the joint hospital was a distinct requirement.

WEETSLADE.

Medical Officer of Health, ALLAN WALKER, M.B., C.M.

Area, 2,198 acres; estimated population, 5,453; birth rate, 41.07; general death rate, 14.48; zymotic death rate, 0.36; infant mortality rate (per 1,000 births), 125; Phthisis death rate, 1.83; death rate from respiratory diseases, 1.1.

With the exception of the birth rate and the Phthisis death rate, which have increased by 0.36 and 0.55 respectively, all the above rates

have decreased as follows:—General death rate, 2.57; zymotic death rate, 0.55; infant mortality rate, 41.66; and the respiratory death rate, 1.65.

Two hundred and twenty-four births were registered during the year, and seventy-nine deaths; of the latter twenty-eight were of children under one year, and fourteen of persons sixty-five years and upwards.

Forty cases of infectious disease were notified as follows:—Small-pox 1, Erysipelas 7, Scarlet fever 29, and Enteric fever 3.

Two deaths occurred from zymotic disease, viz., from Scarlet fever.

Phthisis caused 10 deaths; respiratory diseases, 6; heart diseases, 12; accidents, 1; and premature birth, 6.

The birth rate was the highest recorded in the county and the zymotic death rate was the second lowest in urban districts. The Phthisis death rate was rather higher than during 1904 and was the second highest from this cause in the county. It is especially gratifying to note the very considerable reduction in the infant mortality rate, viz., 41.66 per 1,000 births. The last-mentioned rate varied very much in the different sub-divisions of the district being the lowest—40.81 per 1,000 births in Seaton Burn, 76.92 in Wide Open, 123.07 in Annitsford, and 144.32 in Dudley.

A solitary case of Small-pox occurred in Seaton Burn, three cases of Enteric fever in Annitsford and seven cases of Erysipelas spread over three sub-divisions of the district. Scarlet fever was the only infectious disease affecting any considerable number of persons, the chief incidence of the disease was upon Dudley (22 cases); in Seaton Burn five cases occurred, and two in Annitsford.

Improvements.—A considerable number of houses were built during the year, especially at West Wide Open.

Requirements.—The medical officer again drew attention to the danger arising from badly constructed privy ashpits, of which there are many, having no cement concrete floor and being open to the rain. Receptacles of this kind favour decomposition and cannot possibly be properly cleaned out; the medical officer also alludes to the dirty condition of the Seaton Burn and the unsatisfactory effluent produced at the irrigation ground; to the great need of facilities for isolating patients suffering from infectious disease; to the bad condition of some of the by-roads and so called footpaths, resulting in wet feet and diseases of the respiratory organs, and to the advisability of procuring a destructor.

WHITLEY AND MONKSEATON.

Medical Officer of Health, J. PEEL SPARKS, M.D., Bac. Surg. (Durh.).

Area, 1,650 acres; estimated population, 12,000; birth rate, 19.0; general death rate, *8.75; zymotic death rate, 0.41; infant mortality rate (per 1,000 births), 78.94; Phthisis death rate, 0.66; death rate from respiratory diseases, 1.25.

Of the above rates the birth rate and the Phthisis death rate have increased by 1.82 and 0.16 respectively, the remaining rates have decreased as follows:—General death rate, 1.87; zymotic death rate, 0.43; infant mortality rate, 58.31; and the respiratory death rate, 0.18.

Two hundred and twenty-eight births were registered during the year, and one hundred and five deaths; of the latter eighteen were of children under one year, and forty-two of persons sixty-five years and upwards.

One hundred and twenty-four cases of infectious disease were notified as follows:—Small-pox 1, Diphtheria 8, Membranous croup 1, Erysipelas 7, Scarlet fever 34, Enteric fever 2, and Chicken-pox 71.

Five deaths occurred from zymotic disease, viz:—Whooping cough 2, Diphtheria and Membranous croup 2, and Diarrhœa 1.

Phthisis caused 8 deaths; respiratory diseases, 15; heart diseases, 12; accidents, 5; and premature birth, 4.

The population was estimated to have increased since the previous year by about one hundred and thirty.

The birth rate and the general death rate were each the lowest recorded in the county. The infant mortality rate was the lowest, and the Phthisis death rate was the third lowest in urban districts. It is most satisfactory to note the great reduction (from 137 to 78 per 1,000 births) in the infant mortality rate.

One case of Small-pox was imported into the district and of the other infectious diseases present Scarlet fever was the most in evidence, thirty-four cases having occurred; the district was free from this disease for only two months (April and December) during the year.

Factory and Workshop Act.—The number of workshops on the register was forty-two; five defects were detected all of which were promptly remedied.

Improvements.—More than one hundred houses were erected; nearly a mile of new sewers and nearly two miles of new drains were laid. The water supply was abundant but much discoloured owing to its peaty source. The new abattoir was nearly completed, and two private slaughter houses were converted to other uses. A very large number of drains and sanitary fittings of houses were tested and a considerable amount of disinfection in houses and schools was carried out following cases of infectious disease.

Requirements.—Completion of the scheme for supplying this district with an abundant supply of pure and well filtered water.

The conversion of all privies into w.c.'s. The closure of all private slaughter houses. The provision of a steam disinfector for this and neighbouring districts. The taking over by the council of scavenging operations.

* 9.08 if the death of one non-resident occurring in the district be deducted and if the deaths of five residents occurring outside the district be added.

WILLINGTON QUAY.

Medical Officer of Health, C. T. U. BABST, L.R.C.P., L.R.C.S.

Area, 313 acres; estimated population, 8,214; birth rate, 34.69; general death rate, *17.28; zymotic death rate, 1.82; infant mortality rate (per 1,000 births), 157.89; Phthisis death rate, 0.85; death rate from respiratory diseases, 3.4.

As compared with the previous year the whole of the above rates have increased as follows:—Birth rate, 1.81; general death rate, 2.43; zymotic death rate, 1.09; infant mortality rate, 23.57; Phthisis death rate, 0.73; and the respiratory death rate, 0.21.

Two hundred and eighty-five births were registered during the year, and one hundred and forty-two deaths; of the latter forty-five were of children under one year, and twenty-three of persons sixty-five years and upwards.

Seventy-seven cases of infectious disease were notified as follows:—Small-pox 39, Membranous croup 2, Erysipelas 2, Scarlet fever 21, Enteric fever 3, and Chicken-pox 10.

Fifteen deaths occurred from zymotic disease, viz:—Small-pox 2, Measles 2, Scarlet fever 2, Diphtheria and Membranous croup 2, and Diarrhoea 7.

Phthisis caused 7 deaths; respiratory diseases, 28; heart diseases, 12; accidents, 8; and premature birth, 6.

The general death rate was higher than it has been since the year 1900, and was the second highest recorded in the Administrative

County; the infant mortality rate had increased from 134 in the previous year to 157 per 1,000 births.

As this district is not divided into localities the medical officer gives in Table II. required by the Local Government Board, the estimated population of each street in the district, the number of deaths which occurred in each street, the death rate per 1,000 which such deaths represent, and the mean general death rate for each street for the last eight years. A list is also provided of the months in which Scarlet fever was present, the number of cases in each month and the streets in which they occurred. In connection with the infectious diseases notified, information is also given as to the street in which each case occurred and the age period at which the patients were attacked. Information is also given as to the localities in which the general death rate was above 20 per 1,000 and in which it was below 10 per 1,000 of the population.

Cases of Small-pox (39 in all) were notified during February, March, April and May. All the patients were removed either to Willington Square hospital or to the Moor Park hospital at North Shields. Energetic measures were adopted (vaccination and supervision of contacts, disinfection of houses, the inmates being housed during the disinfection of their houses in one secured for this purpose; circulation of bills dealing with the precautions to be adopted against contracting the disease; and the addition of Chicken-pox to the list of notifiable diseases) for preventing as far as possible any spread of the disease. The usual evidence was forthcoming, in this outbreak, of the protective influence of vaccination; all the fatal cases were unvaccinated and of those who recovered all the severe cases were also unvaccinated.

Two outbreaks of Scarlet fever occurred; the first (3 cases only) in the spring, the second (19 cases) during the last half of the year.

A few cases of Measles occurred in January, and Whooping cough was very prevalent during the fourth quarter.

Only two cases of Diphtheria and Membranous croup, and three of Enteric fever were notified during the year.

Factory and Workshop Act.—The factories numbered five, and twenty-six workshops were on the register. Fifty-five visits of inspection were made; three defects were found, all of which were remedied.

Improvements.—The longstanding nuisance arising from the pollution of the Willington Gut by sewage from Rosehill was at last abated.

The number of privy ashpits in Headlam Street, Brunton Street and elsewhere was further reduced. Some badly paved yards were laid with cement concrete.

An arrangement was made between the Wallsend and Willington councils under which the Wallsend and Willington Joint Hospital Board will take over the Small-pox hospitals belonging to each of the above-named Authorities and provide on one site accommodation for Small-pox cases from either district. This arrangement will save considerable expense to each Authority and also, by the removal of the Wallsend Small-pox hospital the obstacle to the enlargement under loan of the Joint Hospital for diseases, other than Small-pox, will cease to exist.

Requirements.—Several conditions which for years have worried the sanitary officials in this district still called for amelioration; the back rooms and yards in Keelman's Row were damp and defective; the roofs of some houses in Ravensworth Street continued to be repaired and continued to be leaky. The nuisance arising in Palmer's Terrace from ash-closets in confined yards remained as before; w.c.'s should be substituted. Gravel and sand from the Ballast Hill continued to fall into the yards in Stephenson Street and some of the tenants in Keelman's Row continued to pitch refuse and soapy water into the Gut and to pour slop water down the gulleys on the main road. These are all hardy annuals but they should be eradicated.

* 18·38 if the deaths of two non-residents occurring in the district be deducted and if eleven deaths of residents occurring outside the district be added.

RURAL DISTRICTS.

ALNWICK.

Medical Officer of Health, A. SCOTT PURVES, M.D.

Area, 93,009 acres; estimated population, 12,644; birth rate, 25.86; general death rate, *13.99; zymotic death rate, 0.63; infant mortality rate (per 1,000 births), 122.32; Phthisis death rate, 0.86; death rate from respiratory diseases, 1.5.

With the exception of the birth rate which has increased by 0.41, all the above rates have, as compared with the preceding year, decreased as follows:—General death rate, 2.33; zymotic death rate, 1.35; infant mortality rate, 20.98; Phthisis death rate, 0.01; and the respiratory death rate, 0.16.

Three hundred and twenty-seven births were registered during the year, and one hundred and seventy-seven deaths; of the latter forty were of children under one year, and fifty-four of persons sixty-five years and upwards.

Seventy-six cases of infectious disease were notified as follows:—Diphtheria 17, Erysipelas 10, Scarlet fever 46, and Enteric fever 3.

Eight deaths occurred from zymotic disease, viz:—Whooping cough 4, Diphtheria and Membranous croup 2, and Enteric fever 2.

Phthisis caused 11 deaths; respiratory diseases, 19; heart diseases, 19; accidents, 5; and premature birth, 12.

It is most satisfactory to note that the birth rate was slightly higher than during either of the two years immediately preceding and that there was a considerable fall in the infant mortality rate and also in the general death rate, though the latter was the second highest recorded in rural districts. The reduction in the infant mortality rate was most marked in the Embleton sub-district, in which the deaths under one year per 1,000 births numbered one hundred and fourteen, a reduction of fifty-seven. In the Denwick sub-division the birth rate was the highest, and the general death rate, the infant mortality rate and the attack rate for notifiable infectious diseases were the lowest recorded in the three sub-divisions of this district.

Of the infectious diseases present in the district Scarlet fever furnished the greatest number of cases, all, with one exception, being in the Warkworth sub-division, as also were all the cases (3) of Enteric fever. Of the seventeen cases of Diphtheria, thirteen were in the Embleton division; from the Denwick sub-division alone were no cases of infectious disease notified.

Most of the cases of Diphtheria occurred in Radcliffe and Glanton. The medical officer remarks in connection with these outbreaks “At Radcliffe and Glanton conditions exist which, unless great care is taken, tend to the production and recurrence of the disease. At Radcliffe we have a population of between 1,500 and 2,000, a large proportion of whom live in comparatively insanitary houses. The use of privy ashpits is general, an arrangement which, though often the best that can be made at isolated country places, is yet one which in the case of a large and densely packed population like Radcliffe is unsuitable, as demanding more care in the way of frequent cleansing than we ever find expended on such a system. Again, at Radcliffe the roads in front of the older rows of houses, especially the north side of the Long Row, are very uneven and permit of the lodgment of water generally more or less contaminated from the splashing over of the gulleys.

“At Glanton, Diphtheria has for some years put in an appearance now and then, the late outbreak being, however, the most serious for some years. Here we have a population neither so large nor so dense as at Radcliffe. Again, the privy ashpit is not in such general use;

“but, where it is used, it has up till now on the average been much less scavenged. My suspicions were drawn to the privies of the school as a probable source of the disease. In consequence of this epidemic, and my reports thereon, considerable improvements have been made.”

Factory and Workshop Act.—Ninety-six factories and workshops were on the register; all were inspected from time to time and no defects were found.

A report issued by the Property and Sanitation Committee of the county council in November, 1905, shows that, between 1891 and 1901, the one-roomed tenements occupied by more than two and by more than four persons, and the three-roomed tenements occupied by more than four persons had decreased, but that the three-roomed tenements occupied by more than six persons had increased. The report also indicated that a considerable number of back to back houses were to be found at Radcliffe; that in addition to the above, houses with no through ventilation were inhabited at Embleton and other places; that many bad instances of overcrowding were discovered at Radcliffe, Embleton, Low and High Newton and Dunstan Hill Cottages, etc.; that insufficient privy accommodation was provided at Radcliffe (four families having none whatever) and Embleton.

Improvements.—The council acquired the Burghers' Waterworks and considered in what manner the scheme could be improved. Additional stand pipes were supplied at Radcliffe and the supply to the Craster and Dunstan Waterworks was increased. Additional water facilities were provided for the cottages at Broxfield, for the farm house at Heckley Fence, and for Newton Villa. New houses were built at Warkworth, Heather Leazes and Broompark.

The Small-pox hospital site for the joint use of the urban and rural districts was obtained and plans for the hospital buildings were prepared.

An arrangement was made for more frequent and more thorough scavenging at Glanton. The position of the sewer outlets at North Newton-by-the-Sea and High Hauxley were improved and numerous alterations were effected in various parts of the district—Denwick House, High Hauxley, Peppermoor Cottages, Newton House, Felton, Warkworth, Newton Villa-on-the-Moor, Lemmington Branch, Boulmer Hall, Shawdon Wood House, Glanton, Cavil Head, Bowburn, Little Mill Farm Cottages, Gloster Hill, etc.—in the drainage of houses, cowsheds, slaughter houses, etc., and in the trapping and ventilation of drains, all of which will bring the surroundings of these buildings into a more sanitary condition.

Very great improvements were effected at Lesbury school by providing w.c.'s with automatic flushing cisterns. At Glanton and other places several privy ashpits were abolished and w.c.'s provided. At Radcliffe several new privy ashpits were erected.

A new cowshed for twenty cows and a model dairy fitted with the latest appliances were completed at Acklington Field House.

Bye-laws with respect to new streets and buildings for Alnmouth, Embleton, Togston and Warkworth were adopted and sent to the Local Government Board for confirmation.

Requirements.—Better water supplies for Acklington Park, Birling North Field, Glanton North Field, Shipley Lane, Dean Moor, Middle and West Cawledge Park; also for several houses at the higher end of Warkworth.

The erection of the joint Small-pox hospital so long delayed, and the provision of isolation hospital accommodation for diseases other than Small-pox, promised in 1902 and still lacking at the end of 1905.

* 14·47 if the deaths of six residents occurring outside the district be added.

BELFORD.

Medical Officer of Health, J. G. MACASKIE, L.R.C.P., L.R.C.S., D.P.H.

Area, 39,619 acres; estimated population, 5,235; birth rate, 20.43; general death rate, 13.94; zymotic death rate, 1.14; infant mortality rate (per 1,000 births), 93.45; Phthisis death rate, 0.76; death rate from respiratory diseases, 1.33.

Of the above rates the birth rate and the Phthisis death rate have decreased by 1.94 and 0.38 respectively; the remaining rates have increased as follows:—General death rate, 3.24; zymotic death rate, 0.38; infant mortality rate, 42.17; and the respiratory death rate, 0.19.

One hundred and seven births were registered during the year, and seventy-three deaths; of the latter ten were of children under one year, and thirty-one of persons sixty-five years and upwards.

Twenty-four cases of infectious disease were notified as follows:—Diphtheria 2, Membranous croup 1, Erysipelas 8, Scarlet fever 11, and Enteric fever 2.

Six deaths occurred from zymotic disease, viz:—Measles 1, Scarlet fever 2, Whooping cough 1, and Diphtheria and Membranous croup 2.

Phthisis caused 4 deaths; respiratory diseases, 7; heart diseases, 12; accidents, 1; and premature birth, 2.

The population of the district was estimated to have increased by twenty-seven since the census was taken in 1901.

The medical officer divided his district into five sub-divisions and also into the East and West districts. The latter have practically equal populations; the deaths in the East district numbered forty-one, and in the West thirty-two.

The birth rate was the lowest and the Phthisis death rate the third lowest recorded in rural districts.

The infant mortality rate was higher than in 1904, and was above the average for the previous ten years; the general death rate, though higher than during the previous year, was below the average for the past decade. It was for the whole district, 13.94; for the Belford sub-district, 23.96; for North Sunderland, 13.67; for Bamburgh, 21.69; for Beadnell, 13.07; and for the remainder of the district, 9.61 per 1,000.

The infectious diseases notified were slightly in excess of the previous year, and included Diphtheria and Membranous croup, Erysipelas, Scarlet fever and Enteric fever.

The cases of Diphtheria and Enteric fever were all isolated cases and the eleven cases of Scarlet fever were spread over Belford, Bamburgh, and other outlying districts. Beadnell was entirely free from all notifiable diseases. Cases of Measles and Whooping-cough occurred during the last quarter of the year, chiefly at North Sunderland.

Factory and Workshop Act.—The workshops on the register at the end of the year numbered seventy-one; all were inspected and no defects were found.

Improvements.—A few houses were built at Sea Houses and Bamburgh, and new schools were commenced at North Sunderland and Beadnell.

An excellent supply of water from springs at Brockdam and Wandy-law was brought to North Sunderland.

New sewers were laid in Main Street, Bamburgh, at Bent Hall and Beadnell Square.

The sanitary arrangements at Wynding Lane Cottages were greatly improved.

Requirements.—A better water supply for Beadnell and Swinhoe.

BELLINGHAM.

Medical Officer of Health, J. P. ELLIOT, L.R.C.P., L.R.C.S., L.M.

Area, 246,580 acres; estimated population, 6,000; birth rate, 22.83; general death rate, 12.66; zymotic death rate, 0.33; infant mortality rate (per 1,000 births), 51.09; Phthisis death rate, 1.16; death rate from respiratory diseases, 1.0.

Of the above rates the zymotic death rate and the Phthisis death rate have increased by 0.33 and 0.06 respectively; the remainder of the rates have decreased as follows:—Birth rate, 1.62; general death rate, 1.06; infant mortality rate, 71.49; and the respiratory death rate, 0.1.

One hundred and thirty-seven births were registered during the year, and seventy-six deaths; of the latter seven were of children under one year, and thirty-five of persons sixty-five years and upwards.

Twenty cases of infectious disease were notified as follows:—Diphtheria 7, Erysipelas 1, Scarlet fever 11, and Continued fever 1.

Two deaths occurred from zymotic disease, viz:—Scarlet fever 1, and Diphtheria and Membranous croup 1.

Phthisis caused 7 deaths; respiratory diseases, 6; heart diseases, 9; accidents, 1; and premature birth, 2.

The population is estimated to have decreased by 339 in consequence of the completion of the Newcastle and Gateshead Water Company's Works in this district.

The birth rate, infant mortality rate and zymotic death rates were the third lowest in rural districts and the Phthisis death rate was the second highest recorded in rural districts. The general death rate (with the exception of the year 1903 when it was 12.6) and also the infant mortality rate were the lowest ever recorded in the district.

A few cases of Scarlet fever occurred during the month of August; the disease was confined to the Bellingham and Falstone sub-districts. Diphtheria occurred during the months of January, February, September and November, in the Corsenside and Elsdon sub-divisions, and a few cases of Measles and Whooping-cough occurred during the months of March, August, September, October and November.

Factory and Workshop Act.—No mention was made in the medical officer's report of factories or workshops; it is therefore to be inferred that no register was kept. Under Section 131 of the Factory and Workshop Act, 1901, it is the duty of every district council to keep a register of all workshops situate within their district.

Improvements.—A few new houses were built at Bellingham and Otterburn. Water supplies were provided at Otterburn Mill, Clay Walls, Whitelee and Whitelee Cottages, and Low Park Woodburn.

The main sewer for Percy Terrace was completed, the sewers at Otterburn and Reedsmouth were repaired, the Ridsdale sewer was ventilated and the main sewer at Bellingham extended. New drains were laid at Otterburn Hall, Close Head, Cross House, Monkridge Hall, Hindhaugh, Parkhead, Hawick, Clay Walls, Cold Town, Whitelee, Whitelee Cottages, Otterburn Lodge, Woolaw, Ridsdale and Otterburn Farm. Negotiations were entered into with the object of obtaining a better water supply for Woodburn.

Requirements.—A better water supply was needed at Bellingham, Wark, Woodburn, Otterburn, Birtley, West Woodburn and outlying houses.

A scheme was prepared in 1903 and an inquiry held by the Local Government Board immediately after which the ratepayers petitioned against the scheme on the score of expense; the district council undertook to try and arrange for a less costly scheme, and up to the end of 1905 no progress had been made.

Means for isolating cases of Small-pox.

The medical officer's annual report should be printed.

CASTLE WARD.

Medical Officer of Health, WILLMOT HOLMES, M.R.C.S., L.R.C.P.

Area, 85,124 acres; estimated population, 10,798; birth rate, 24.44; general death rate, 11.39; zymotic death rate, 1.01; infant mortality rate (per 1,000 births), 90.9; Phthisis death rate, 0.74; death rate from respiratory diseases, 0.92.

The whole of the above rates have, as compared with the previous year, decreased as follows:—Birth rate, 0.67; general death rate, 2.78; zymotic death rate, 0.7; infant mortality rate, 53.03 (per 1,000 births); Phthisis death rate, 0.02; and the respiratory death rate, 0.79.

Two hundred and sixty-four births were registered during the year, and one hundred and twenty-three deaths; of the latter twenty-four were of children under one year, and forty-one of persons sixty-five years and upwards.

Eighty-nine cases of infectious disease were notified as follows:—Small-pox 2, Diphtheria 13, Membranous croup 1, Erysipelas 14, Scarlet fever 55, Enteric fever 2, and Puerperal fever 2.

Eleven deaths occurred from zymotic disease, viz:—Measles 2, Scarlet fever 2, Whooping cough 1, Diphtheria and Membranous croup 4, and Diarrhoea 2.

Phthisis caused 8 deaths; respiratory diseases, 10; heart diseases, 15; accidents, 6; and premature birth, 7.

The general death rate and the Phthisis death rate were each the second lowest in rural districts.

It is satisfactory to note that not only did all the mortality rates indicate a reduction as compared with the previous year, but that only two isolated cases of Enteric fever occurred. Of the fourteen cases of Diphtheria and Membranous croup, four were notified from Dinnington Colliery and three from Dissington; the remainder were all isolated cases.

Of the fifty-five cases of Scarlet fever, eighteen occurred at Dinnington Colliery and eleven at Dinnington, eight at Prestwick and six at Ponteland. The medical officer bears testimony to the reckless manner in which the disease was spread by the well nigh universal practice of neighbours inspecting every case of infectious disease and in many cases taking their children with them.

Measles was prevalent during January, necessitating school closure at Heddon-on-the-Wall, and Whooping-cough in November and December, on account of which disease schools were closed at Hyham Dykes and Dalton.

In November, 1905, a report issued by the Property and Sanitation Committee of the county council referring to the condition of (1) Overcrowding and (2) Insanitary dwellings consequent upon overcrowding, showed that, between the years 1891 and 1901, the number of one-roomed tenements occupied by more than two persons and by more than four persons, and of two-roomed tenements occupied by more than four persons, had all decreased, and that the number of three-roomed tenements occupied by more than six persons had increased by twenty; also that at Dinnington Colliery about forty houses were built back to back, and at Dinnington Village several houses were separated from others by an interval of a few feet only; that at Ponteland the contents of several ash-pits must be wheeled out owing to there being no access for a cart, and that at Fawdon Square, houses possessing no through ventilation were found and also cases of overcrowding. One case of overcrowding was discovered at Prestwick. At Fawdon Old Pit two houses were unprovided with drains and at Ponteland and elsewhere several instances were found of stables or cowsheds built on to houses.

Factory and Workshop Act.—The factories numbered three, the workshops eight and the workplaces one. Twelve visits of inspection were made and no infringements of the Act were found.

Improvements.—A large number of houses were built or completed at Dinnington Colliery and Ponteland. Seven houses at Slateyford were closed. Dinnington Village was supplied with water by the Newcastle and Gateshead Water Co. and new water supplies were provided for Darras Hall, Eachwick and Pen's Close.

The sewage disposal works for Dinnington Colliery were completed and an excellent effluent was procured.

The irrigation ground at Ponteland was, to some extent, levelled and trenched. Schemes for the treatment of sewage were completed at Heddon-on-the-Wall, Woolsington Hall, Fawdon House, Fawdon Farm, Prestwick Lodge, and the Wheat Sheaf on the Newcastle and Ponteland road.

New w.c.'s were provided for the Stannington C.E. Schools and for the Endowed Schools at Ponteland.

A number of minor improvements in drainage, etc., etc., were effected at Stamfordham, Dinnington, Benridge Hall, West Brunton Farm, Hazelrigg Colliery, and other places.

The joint hospital for the Gosforth and Newburn urban district and for a portion of the Castle Ward rural district was completed and opened in September.

Requirements.—A more satisfactory water supply was greatly needed at Ponteland. Water continued to be procured from wells, several of which failed partially or entirely during dry weather and most of which must be considered unsatisfactory on account of their nearness to cess-pools and drains.

The insanitary conditions alluded to in the report of the Property and Sanitation Committee needed amelioration.

The condition of most of the roads and yards at Dinnington Colliery and the almost total absence of footpaths was most serious.

A permanent site for a Small-pox hospital was still unsecured at the end of the year.

Great improvements were needed in the structure of privy ash-pits in several localities, many of them combining every insanitary condition.

The pollutions of the Ouseburn and its tributaries, as reported in November, 1904, at many points in this district, continued, with few exceptions to be unchanged, and with the few exceptions alluded to, but little attempt appeared to have been made to bring about improved conditions.

GLENDALE.

Medical Officer of Health, ALEXANDER DEY, M.B., C.M.

Area, 147,942 acres; estimated population, 8,770; birth rate, 20.98; general death rate, 12.65; zymotic death rate, 0.22; infant mortality rate (per 1,000 births), 108.69; Phthisis death rate, 0.79; death rate from respiratory diseases, 1.14.

Of the above rates the general death rate is the same as that obtaining for the previous year, the Phthisis death rate and the respiratory death rate have decreased by 0.35 and 0.68 respectively, while the remainder of the rates have increased as follows:—Birth rate, 0.81; zymotic death rate, 0.11; and the infant mortality rate, 57.85.

One hundred and eighty-four births were registered during the year, and one hundred and eleven deaths; of the latter twenty were of children under one year, and fifty-one of persons sixty-five years and upwards.

Twenty-four cases of infectious disease were notified as follows:—Diphtheria 2, Erysipelas 8, Scarlet fever 12, Enteric fever 1, and Puerperal fever 1.

Two deaths occurred from zymotic disease, viz:—Whooping cough 1, and Diphtheria and Membranous croup 1.

Phthisis caused 7 deaths; respiratory diseases, 10; heart diseases, 22; accidents, 1; and premature birth, 6.

It is estimated that the population has remained stationary since 1901.

The birth rate and the zymotic death rate were the second lowest in rural districts and the third lowest in the Administrative County.

The district was again very free from infectious disease and entirely free from Small-pox.

The Howtle School was closed in July on account of German Measles.

In consequence of a communication from the Police Committee of the River Tweed Commissioners calling attention to the polluted state of that river and of some of its tributaries, the county council, on a recommendation of the Property and Sanitation Committee, agreed to concur in taking steps for the purification of the river.

Factory and Workshop Act.—No register appears to have been kept of the factories and workshops in the district, but it is reported that they were inspected and that no defects were discovered.

Improvements.—Two houses and nine cottages were built in Wooler; two cottages at Wooler Cottage Farm and one at North Middleton.

A good water supply was provided for the cottages at South Middleton and Milfield Demesne, also for Ford Wood House and Routin Linn.

The sewage disposal works were completed during the year, but some trouble was experienced, partly owing to a larger volume of sewage being delivered at the works than that for which they were constructed.

Three new slaughter houses were built during the year and a fourth was commenced.

Improved drainage was provided for the Red Lion Inn, Barmoor, for some cottages at West Learmouth, for the farm house at Barelees, for the cottages at Milfield Demesne and for the Lodge at Etal Village.

Requirements.—A more abundant water supply in many parts of the district, especially at Lowick.

Carrying out the necessary alterations to the sewage disposal works at Wooler and connecting every house with the sewage disposal system.

HALTWHISTLE.

Medical Officer of Health, W. R. SPEIRS, M.B., C.M.

Area, 96,333 acres; estimated population, 8,900; birth rate, 27.19; general death rate, 11.91; zymotic death rate, 0.67; infant mortality rate (per 1,000 births), 111.57; Phthisis death rate, 0.89; death rate from respiratory diseases, 1.34.

Of the above rates the birth rate, the infant mortality rate and the respiratory death rate have increased by 0.32, 18.35 and 0.09 respectively, the remaining rates have decreased as follows:—General death rate, 2.32; zymotic death rate, 1.26; and the Phthisis death rate, 0.36.

Two hundred and forty-two births were registered during the year, and one hundred and six deaths; of the latter twenty-seven were of children under one year, and thirty-eight of persons sixty-five years and upwards.

Eighty-nine cases of infectious disease were notified as follows:—Diphtheria 22, Erysipelas 7, Scarlet fever 56, Enteric fever 1, and Puerperal fever 3.

Six deaths occurred from zymotic disease, viz:—Scarlet fever 2. Diphtheria and Membranous croup 3, and Diarrhœa 1.

Phthisis caused 8 deaths; respiratory diseases, 12; heart diseases, 12; accidents, 1; and premature birth, 7.

It was estimated that the population had increased by about one hundred and twenty during the previous twelve months.

The medical officer divides the district into five sub-divisions, viz., No. 1, Haltwhistle; No. 2, Melkridge and Henshaw; No. 3, Blenkinsopp and Thirlwall; No. 4, Lambley and Hartley Burn; and No. 5, the remaining townships.

The birth rate varied from 19.4 per 1,000 in No. 5 to 34.3 in the No. 1 sub-division. The death rate was the third lowest in rural districts and varied from 6 per 1,000 in the No. 5 to 15.3 in the No. 1 sub-district. The infant mortality rate per 1,000 births was lowest (47.6) in No. 4 and highest (194) in No. 3 sub-division.

The zymotic death rate was nil in the No. 2 and No. 4 sub-districts and the highest rate (1.2 per 1,000 living) obtained in the No. 1 sub-district.

In speaking of infant mortality the medical officer points to improper feeding and want of cleanliness as conducing to so great an extent to the mortality among children under twelve months old and acknowledges the valuable educational influence exerted by district nurses.

The cases of infectious disease notified numbered little more than half those notified during the previous year. Scarlet fever cases occurred during the first six and the last three months of the year, the disease being, for the most part, in sub-districts Nos. 1 and 5.

Of the twenty-two cases of Diphtheria, seventeen occurred in No. 1 sub-district, as did also the solitary case of Enteric fever.

When on the subject of the spread of infectious diseases the medical officer bewails the carelessness and thoughtlessness of parents who allow the members of their family, while in an infectious condition, to mix, not only with the rest of the family, but, with the general public.

The medical officer acknowledges the assistance derived from the county council's arrangement for free bacteriological examination of specimens in certain cases of suspected infectious disease and advocates antitoxin serum being supplied free, in suitable cases, for the treatment of Diphtheria.

In November, 1905, a report issued by the Property and Sanitation Committee of the county council upon Overcrowding and Insanitary dwellings consequent upon overcrowding, showed that, between 1891 and 1901, while the one-roomed tenements occupied by more than four persons and two-roomed tenements occupied by more than four persons, also three-roomed tenements occupied by more than six persons had all decreased, the one-roomed tenements occupied by more than two persons had slightly increased.

It also appeared from the report that one or two cases of overcrowding were found in Haltwhistle and at the Pit Cottages, at Bank Foot, at Byron Terrace and Greenhead; also at Longbyre, Castle Terrace, Milburn Terrace and Moor View. Other insanitary conditions were found at the Pit Cottages, Longbyre and Greenhead.

Factory and Workshop Act.—The factories numbered three and the workshops twenty-eight. Thirty-three visits of inspection were paid; seven defects were found all of which were remedied.

Improvements.—About fifty new buildings were completed or in course of erection.

Water mains were extended in the Haltwhistle division by which several houses obtained a more abundant supply and the council considered a scheme prepared by an engineering expert for supplying houses on the north side of Haltwhistle, not supplied from the mains.

Plans and estimates were prepared for a sewerage scheme for Gilsland and great improvements were effected in Haltwhistle by relaying of footpaths, kerbing and channelling; and powers were obtained for making up several streets.

Requirements.—The carrying out of a water scheme for Longbyre and for about thirty houses on the north side of Haltwhistle; alterations at Thorngrifton with a view of improving the quality of the water stored at this place; an improved water supply scheme for Gilsland and Melkridge; considerable alterations at the irrigation ground, Haltwhistle; a large portion of the ground is not used, the tanks require reconstruction and a foul effluent is discharged into the river. Increased facilities for tipping refuse at Haltwhistle. The making up of roads in the vicinity of several new streets in Haltwhistle.

A sewerage and sewage disposal scheme for Melkridge, Longbyre, Greenhead and Gilsland.

More thorough scavenging of ashpits, especially in Haltwhistle.

HEXHAM.

Medical Officer of Health, T. CUNNINGHAM PENFOLD, M.B.,
C.M., M.R.C.S., L.R.C.P.

Area, 200,700 acres; estimated population, 27,882; birth rate, 25.82; general death rate, *12.76; zymotic death rate, 0.57; infant mortality rate (per 1,000 births), 86.11; Phthisis death rate, 0.86; death rate from respiratory diseases, 1.57.

With the exception of the respiratory death rate, which has increased by 0.14 in comparison with the previous year, all the above rates have decreased as follows:—Birth rate, 0.66; general death rate, 4.12; zymotic death rate, 1.94; infant mortality rate, 63.14; and Phthisis death rate, 0.79.

Seven hundred and twenty births were registered during the year, and three hundred and fifty-six deaths; of the latter sixty-two were of children under one year, and one hundred and thirty-seven of persons sixty-five years and upwards.

Two hundred and thirty-two cases of infectious disease were notified as follows:—Small-pox 1, Diphtheria 56, Erysipelas 38, Scarlet fever 118, Enteric fever 15, Continued fever 1, and Puerperal fever 3.

Sixteen deaths occurred from zymotic disease, viz:—Measles 4, Scarlet fever 3, Whooping cough 1, Diphtheria and Membranous croup 4, Enteric fever 1, and Diarrhœa 3.

Phthisis caused 24 deaths; respiratory diseases, 44; heart diseases, 57; accidents, 11; and premature birth, 5.

The general death rate was not only 4 per 1,000 less than during the previous year, but was the lowest ever recorded in this district, as was also the infant mortality rate. The zymotic death rate (0.57) was, for the whole district, slightly lower than during 1904, and was also the lowest ever recorded in this district. As will be seen from the Table appended, the various rates in the Bywell sub-district had considerably improved as compared with the three other sub-divisions, and also as compared with previous years; thus the general death rate, in this sub-district, was the lowest but one, as were also the attack rate from notifiable infectious diseases and the zymotic death rate. The infant mortality rate, though the highest in any sub-district was 93 per 1,000 births lower than during the previous year.

Sub-districts	General death rate per 1,000 living.			Infant mortality rate per 1,000 births.			Zymotic death rate per 1,000 living.			Attack rate per 1,000 living from notifiable infectious disease.		
	1903.	1904.	1905.	1903.	1904.	1905.	1903.	1904.	1905.	1903.	1904.	1905.
Allendale ...	14·85	16·32	14·44	57·14	75·47	63·06	0·41	1·67	0·20	4·6	7·11	11·5
Bywell ...	19·80	18·01	11·83	161·53	195·06	102·75	4·74	3·97	0·52	42·09	26·20	8·3
Chollerton..	13·21	13·74	9·81	101·01	89·55	67·30	0·74	0·92	0·37	14·33	6·87	4·6
Hexham ...	14·31	17·04	17·44	103·09	119·56	84·90	0·92	0·92	1·37	6·23	15·43	9·4
Whole district	16·82	16·92	12·76	128·79	149·25	86·11	2·62	2·51	0·57	24·67	17·5	8·32

The cases of infectious disease notified during the year were greatly reduced, being two hundred and fifty-five less than during the previous year.

Scarlet fever, Diphtheria and Erysipelas were notified from each of the sub-districts; the chief incidence of Scarlet fever was on the Allendale sub-division; the Enteric fever cases were confined to the Bywell and Hexham sub-divisions, nine in the former and six in the latter; of the fifty-six cases of Diphtheria forty-eight occurred in the Bywell division, as did twenty-nine of the thirty-eight cases of Erysipelas.

Taking the whole of the notifiable diseases, fifty-five were in the Allendale division, one hundred and eleven in the Bywell, twenty-five in the Chollerton and forty-one in the Hexham sub-districts. Measles was present during the first six and the last three months of the year; Scarlet fever during the first four months and again in October; Whooping-cough during October and November and Diphtheria in August and September.

Factory and Workshop Act.—The workshops on the register at the end of the year numbered seventy-three. Sixty-five visits of inspection were made to factories, and one hundred and nine to workshops; forty-seven defects were found, thirty written notices were sent and all defects were remedied.

A report issued by the Property and Sanitation Committee of the county council in November, 1905, shows that, during the years 1891-1901, the number of one-roomed tenements occupied by more than two and by more than four persons, and of two-roomed tenements occupied by more than four persons had decreased, but that the number of three-roomed tenements occupied by more than six persons had increased.

The report also showed that a considerable number of back to back houses were found in West Wylam, Prudhoe, Low Prudhoe, Mickley Square and Newbrough Village; that houses having no through ventilation, though not built back to back, were found in West Wylam, Prudhoe, Low Prudhoe, at the Hagg Cottages and at the Wooden Houses near Wylam Station; that in some localities no access for a scavenger's cart existed, and the contents of privy ashpits had to be wheeled out, or carried up steps, or shovelled on to the footpath; also that many instances of overcrowding existed at West Wylam and Prudhoe, in Mickley and Mickley Square, at the Hagg Cottages, at the Railway Cottages near Fourstones Station, at Blenkinsop's Farm, at Kiln Hill Cottages, Brass Cottages, Prudham Cottages, Newbrough Village, and at Acomb.

In addition to the above, privy ashpits, many of which presented every insanitary characteristic, abounded all over the district, the chief defects being that they were not constructed of impervious material, that they were sunk into the ground and in many cases had no bottom

except earth; that they were uncovered and in many instances received the roof water from neighbouring buildings; several were purposely drained on to adjacent roads, many were dilapidated, some privies consisting of half-rotten wooden sentry boxes with nothing under the seat but the bare earth. For some houses no ashpits were provided, for others neither privy nor ashpit. In some localities the privy accommodation besides being grossly insanitary was totally inadequate. For some houses no drains were provided. In one locality a row of privies was built on the edge of a watercourse, the contents of the privies being purposely directed into the burn by an inclined slab; all slopwater from these houses was also thrown into the burn as no drains were provided.

Improvements.—Eighty-five new houses were occupied during the year and plans for a considerable number were presented and approved, besides a large number of plans for improving the structural conditions of existing houses and their drainage, etc. Plans were also approved for new out-offices at Ovington, Mickley, and Acomb schools and for extensive additions and alterations at Prudhoe Schools.

The erection of a Sanatorium for the reception and treatment of consumptive patients, with administrative block, isolation hospital, caretaker's cottage and the necessary plant for heating and electric lighting was commenced and made considerable progress.

The mains of the Newcastle and Gateshead Water Co. were extended so as to supply the Painshawfield estate. A scheme was prepared for supplying High Mickley with water.

Main sewers were relaid and extended at Allendale, Prudhoe, Corbridge, Mickley, Eltringham and Prudhoe Castle.

A new Small-pox hospital was erected at Lightwater.

Scavenging in the Prudhoe district was carried out in a much more satisfactory manner than formerly which no doubt contributed to a large extent to the increased healthiness of the district, as also did many improvements in drainage, paving of yards, stables and cowsheds, alterations and repairs of ashpits, and a very large amount of disinfection carried out in schools and dwelling houses.

A scheme for sewerage and sewage disposal was prepared for Hedley-on-the-Hill and a sewage disposal scheme for the Prudhoe district, including West Wylam, was commenced; the contract for the Ovingham sewage disposal scheme was let and schemes of sewerage and sewage disposal were completed for the undermentioned places—Eltringham, Mickley, Prudhoe Castle, and Low Prudhoe, with the exception of the station premises which were not connected.

Requirements.—Improved water supplies, especially for New Ridley, Wittonstall, High Mickley, Haydon Bridge and Catton, also for the houses on the south side of the river at Corbridge, at Edgewell and outlying farms, and for Newbrough Village. Removal of the nuisance occasioned by untreated sewage from New Ridley. Sewage disposal schemes for Hedley-on-the-Hill, Corbridge, Riding Mill, South Wylam, Hagg Cottages, Ovingham, Ovington, Haydon Bridge, Acomb, Stocksfield, Branch End and Alexandra Terraces, Merryshields and Birches Nook. Completion of the sewerage scheme for High Prudhoe and of the scheme for sewage disposal at North Wylam; connection of the Prudhoe Station premises with the scheme recently carried out for Low Prudhoe; removal of the nuisance caused by accumulation of sewage in the Church Dene, Allendale Town.

Though, as before stated, scavenging in the Prudhoe locality was carried out in a more satisfactory manner than formerly, yet from the faulty construction of many of the ashpits, their position in confined spaces, and in many instances the difficulty of access, make it highly desirable that scavenging should be undertaken in this densely

populated locality by the council, especially as, in this way, the work could be performed with greater regularity, thoroughness and economy than by letting it to contractors, who would not undertake it if there were not a considerable margin of profit. Increased accommodation, improved ventilation and other alterations were required at the Corbridge, Wylam and Hedley-on-the-Hill schools.

* 12·8 if the death of one resident occurring without the district be added.

MORPETH.

Medical Officer of Health, J. P. PHILIP, M.D., D.P.H.

Area, 85,498 acres; estimated population, 17,000; birth rate, 29.23; general death rate, *21.64; zymotic death rate, 1.58; infant mortality rate (per 1,000 births), 140.84; Phthisis death rate, 1.23; death rate from respiratory diseases, 1.82.

Of the above rates the birth rate, the Phthisis death rate and the respiratory death rates have increased by 0.51, 0.14 and 0.07 respectively; the remaining rates have decreased as follows:—General death rate, 3.42; zymotic death rate, 2.35; and the infant mortality rate, 55.36.

Four hundred and ninety-seven births were registered during the year, and three hundred and sixty-eight deaths; of the latter one hundred and twenty-one were of non-residents occurring in the district, while three deaths of residents occurred outside the district, leaving two hundred and fifty deaths on which the rate is calculated. Of this latter number seventy were of children under one year, and fifty-seven of persons sixty-five years and upwards.

One hundred and thirty-six cases of infectious disease were notified as follows:—Diphtheria 14, Membranous croup 4, Erysipelas 9, Scarlet fever 87, Enteric fever 21, and Puerperal fever 1.

Twenty-seven deaths occurred from zymotic disease, viz:—Measles 5, Scarlet fever 2, Whooping cough 1, Diphtheria and Membranous croup 6, Enteric fever 1, and Diarrhoea 12.

Phthisis caused 21 deaths; respiratory diseases, 31; heart diseases, 24; accidents, 17; and premature birth, 18.

The medical officer divided his district into two localities—Colliery and Agricultural—the population of the former being estimated at 12,500 and of the latter 4,500. The population of the whole district was estimated to have increased by 500 since 1904, the increase having been wholly in the Colliery division. The birth rate for the whole district (29.23) was the highest ever recorded in this district and was the third highest in rural districts in the county; in the Colliery division it was 35.36 and in the Agricultural 12.88 per 1,000 of the population.

The general death rate for the whole district was the highest recorded in rural districts (as was also the Phthisis death rate); the former was 17.1 per 1,000 in the Colliery and 7.5 in the Agricultural sub-districts. The infant mortality rate for the whole district, though the third highest in rural districts, indicated a considerable improvement compared with the previous year, the reduction being 55 per 1,000 births; in the Colliery division the rate was 144 and in the Agricultural 104 per 1,000 births. The death rate from zymotic diseases was the third highest recorded in rural districts; in the Colliery district the rate was 2.08 and in the Agricultural 0.22 per 1,000.

Of the one hundred and thirty-six cases of infectious diseases notified, one hundred and twenty-two were in the Colliery division and of these one hundred and three occurred in the Broomhill and Widdrington localities. Of the remaining fourteen, five occurred in the Agricultural sub-district and nine in the County Asylum. Of the fourteen cases of Diphtheria, ten occurred in the Broomhill district, as did also all the cases of

Erysipelas, most of the Scarlet fever cases, eleven of the twenty-four cases of Enteric fever, and the one case of Puerperal fever. Besides the diseases above mentioned, Whooping-cough, Measles and Mumps were epidemic—Whooping-cough from March to December, Measles and Mumps during the first quarter and again in December, necessitating school closure at Widdrington, Cambo, Long Horsley and Hartburn.

Factory and Workshop Act.—The number of factories and workshops registered during the year were two and three respectively; thirty-six visits of inspection were paid and no defects were found.

Improvements.—Plans for the erection of twenty-six dwelling houses were passed. Bye-laws regulating the erection of new buildings and the laying out of streets were framed and confirmed by the Local Government Board.

A scheme was adopted for distributing water to fifty houses at Newbiggin Links. A sewerage and sewage disposal scheme was carried out for Red Row, Broomhill, also at Morpeth Station, Stobswood Farm and Woodburn Village; urban powers were obtained for works of street paving at Broomhill. A new sewer was laid at Broomhill and many improvements in drainage, etc., were carried out at Linton Mill, Newton Park Farm, Widdrington Village, Spittal Hill and West Thirston. Scavenging was, under pressure, carried out more systematically. Plans for a cemetery at Chevington were approved.

Very considerable improvements were carried out at the County Asylum, the whole of the drainage system having been relaid. The heating apparatus was entirely revised by which considerable economy in fuel was secured, defective floors and ceilings were replaced, and the sewage disposal works were overhauled and provided with sprinklers.

Requirements.—Improved water supplies for Hartburn School and Longhirst Vicarage, at neither of which places was any provision made. Improved distribution of water at Chevington Wood Houses and a better supply for Middleton. Sewage disposal schemes for Cambo, Hepscott, Widdrington Colliery, Bus Row and Red Houses, Bullock's Hall. Sewerage and sewage disposal scheme for Chevington Wood Houses where no drainage exists. Improved sanitary arrangements for cottages at Netherwitton and Middleton. Increased cleanliness and better drainage about farmhouses and cowsheds in several localities, and measures for obviating the gross pollution of water courses, of which there are many instances, including Stead's Burn, Hepscott Burn, Coalburn, and the River Lyne or its tributaries, etc. Scavenging operations should be carried out in some districts with greater regularity and at shorter intervals.

* 14·7 if 121 deaths of non-residents occurring in the district be deducted and if three deaths of residents occurring outside the district be added.

NORHAM AND ISLANDSHIRES.

Medical Officer of Health, J. PAXTON, L.R.C.P., L.R.C.S.

Area, 47,072 acres; estimated population, 6,054; birth rate, 23.45; general death rate, 10.4; zymotic death rate, 0.16; infant mortality rate (per 1,000 births), 28.16; Phthisis death rate, 0.99; death rate from respiratory diseases, 0.99.

Of the above rates the birth rate and the Phthisis death rates have increased by 1.98 and 0.17 respectively; the remainder of the rates have decreased as follows:—General death rate, 2.97; zymotic death rate, 0.33; infant mortality rate, 33.37; and the respiratory death rate, 0.65.

One hundred and forty-two births were registered during the year, and sixty-three deaths; of the latter four were of children under one year, and thirty-one of persons sixty-five years and upwards.

Thirty-six cases of infectious disease were notified as follows:—Diphtheria 2, Erysipelas 3, Scarlet fever 29, Enteric fever 1, and Puerperal fever 1.

One death occurred from zymotic disease, viz., from Diphtheria.

Phthisis caused 6 deaths; respiratory diseases, 6; heart diseases, 11; accidents, 1; and premature birth, nil.

The population was estimated to have remained stationary since 1901, and to be about three hundred less than during the previous decade.

The general death rate and the zymotic death rate were each the lowest recorded in rural districts, and the second lowest in the county. The infant mortality rate was the lowest recorded in either urban or rural districts.

The district was free from Small-pox and with the exception of Scarlet fever no infectious disease assumed epidemic proportions. Though the infectious diseases notified were twelve in excess of those occurring during the previous year, it is satisfactory to note that only one case each of Enteric fever and Puerperal fever occurred, and two cases only of Diphtheria, also that the infant mortality rate was 33 per 1,000 births below the low rate of 61.5 recorded during 1904, and 89.3 below the average rate for the ten years 1895-1904. Only one death occurred from the above-named diseases.

In consequence of a communication from the Police Committee of the River Tweed Commissioners calling attention to the polluted state of that river and of some of its tributaries the county council, on a recommendation of the Property and Sanitation Committee, agreed to concur in taking steps for the purification of the river.

Factory and Workshop Act.—The factories numbered four and the workshops on the register at the end of the year numbered eleven; forty-five visits of inspection were made and no defects were discovered.

Improvements.—The water supply for Ancroft Village was greatly improved. Plans for a new school at Duddo were approved and the drainage and outoffices of Scremerston school were greatly improved, a remark which also applies to various properties at East Loanend, Norham, East Ord and Grievestead.

Requirements.—Some of the private water supplies needed protection from risk of surface pollution.

A caretaker should be provided at the hospital, one of whose duties should be to keep the building and its contents thoroughly aired; this arrangement could probably be made without any expense being incurred by the sanitary authority; without it the building will inevitably become rotten, and is in addition in constant danger of being occupied by vagrants and very possibly of being burned down.

A more accessible water supply for Norham East Mains.

ROTHBURY.

Medical Officer of Health, F. BARROW, M.R.C.S., L.S.A.

Area, 166,904 acres; estimated population, 4,855; birth rate, 23.48; general death rate, 12.77; zymotic death rate, 0.2; infant mortality rate (per 1,000 births), 35.08; Phthisis death rate, 1.02; death rate from respiratory diseases, 1.85.

Of the above rates the zymotic death rate and the infant mortality rate have decreased by 0.42 and 55.01 respectively; the remaining rates have increased as follows:—Birth rate, 0.46; general death rate, 1.16; Phthisis death rate, 1.02; and the respiratory death rate, 1.02.

One hundred and fourteen births were registered during the year, and sixty-two deaths; of the latter four were of children under one year, and twenty-seven of persons sixty-five years and upwards.

Thirty-one cases of infectious disease were notified as follows:—Erysipelas 2, Scarlet fever 28, and Enteric fever 1.

One death occurred from zymotic disease, viz., from Scarlet fever.

Phthisis caused 5 deaths; respiratory diseases, 9; heart diseases, 10; accidents, 3; and premature birth, 1.

The medical officer divided his district into seven localities, for each of which he calculated the population, the births and deaths registered, the deaths under twelve months and the general death rate; the latter varied from 5 per 1,000 in the Longhorsley and Netherwitton to 21 in the Alwinton sub-divisions.

The infant mortality rate was the second lowest recorded in the county and considerably below the average for rural districts in England and Wales which was 113 per 1,000 births; it was also 69.2 per 1,000 births below the average for this district.

The following table indicates the various rates which obtained in each of the seven sub-districts and also the attack rate per 1,000 of the population from notifiable infectious diseases.

Sub-districts.	Popu-lation.	Births.		Deaths.		Infant deaths.		Zymotic deaths.		Infectious diseases notified.	
		Number.	Rate per 1,000 living.	Number.	Rate per 1,000 living.	Number.	Rate per 1,000 births.	Number.	Rate per 1,000 living.	Number.	Rate per 1,000 living.
Rothbury ...	1,420	32	22.53	17	11.97	2	62.50	1	0.70	10	7.04
Alwinton...	860	16	18.60	18	20.93	1	62.50	...	Nil.	4	4.65
Whittingham ...	770	18	23.37	7	9.09	0	Nil.	...	Nil.	7	9.09
Longframlington	470	8	17.02	7	14.89	0	Nil.	...	Nil.	...	Nil.
Alnham and Brinkburn	365	9	24.65	3	8.21	0	Nil.	...	Nil.	...	Nil.
Cambo and Elsdon	570	17	29.85	8	14.03	1	58.82	...	Nil.	...	Nil.
Longhorsley and Netherwitton	400	14	35.00	2	5.00	0	Nil.	...	Nil.	10	25.00
Whole district ...	4,855	114	23.48	62	12.77	4	35.08	1	0.20	31	6.38

Of the thirty-one cases of notifiable infectious disease, ten occurred in the Rothbury sub-district and the same number in the Longhorsley and Netherwitton district (in each district Erysipelas 1 and Scarlet fever 9); of the remaining ten cases of Scarlet fever, seven occurred in the Whittingham and three in the Alnwinton divisions. The single case of Enteric fever was notified from the Alwinton sub-district. No infectious diseases were notified from the Longframlington, Alnham and Brinkburn or Cambo and Elsdon sub-districts.

Only one death resulted from zymotic disease—Scarlet fever. There was an almost total absence of non-notifiable infectious diseases; Measles was imported into the district in May and Whooping-cough in July, but both diseases were confined to the families first attacked.

Factory and Workshop Act.—Four workshops were returned, all of which were inspected and no cause of complaint discovered. No mention was made of a register being kept. Under Section 131 of the Factory and Workshop Act, 1901, every district council is required to keep a register of all workshops situate within their district.

Mr. Bertram, of Cragside, again supplied particulars of the rainfall during the year, from which it appears that the driest months were

January and December, and the months with the highest rainfall were November, August and October, in the order named. The rainfall for the year was 29.38 inches, which was 4.62 below the average.

Improvements.—About seven cottages were built or rebuilt during the year. The water main supplying Wingates Moor was relaid. Improved water supplies were procured for the houses in Whittingham Lane and for Wingates. Alterations and improvements were effected in the drainage at Little Mill, Wagtail, Plainfield, High Farnham, Alnham, Alwinton, Middle and Low Barton, Elsdon, Healey, High and Low Trehwitt, Newtown, Tosson Mill, Snitter, etc.

Requirements.—More reliable water supply at Low Trehwitt and Alnham, Forest Burn Gate, Halling Hill, Harbottle, Low Trehwitt, The Peels and Long Framlington. Better drainage at Caistron, Little Tosson, Tosson Mains and Tosson Mill, etc.

TYNEMOUTH No. 1.

Medical Officer of Health, A. S. TAYLOR, L.R.C.P., L.R.C.S.

Area, 7,929 acres; estimated population, 10,263; birth rate, 30.49; general death rate, 14.03; zymotic death rate, 1.65; infant mortality rate (per 1,000 births), 175.71; Phthisis death rate, 0.58; death rate from respiratory diseases, 1.94.

Of the above rates the birth rate and the infant mortality rate have increased by 1.07 and 0.63 respectively; while the remainder of the rates have decreased as follows:—General death rate, 1.42; zymotic death rate, 0.62; Phthisis death rate, 0.21; and the respiratory death rate, 0.14.

Three hundred and thirteen births were registered during the year, and one hundred and forty-four deaths; of the latter fifty-five were of children under one year, and thirty-six of persons sixty-five years and upwards.

Three hundred and twenty-six cases of infectious disease were notified as follows:—Diphtheria 31, Membranous croup 6, Erysipelas 34, Scarlet fever 58, Enteric fever 6, Puerperal fever 1, and Chicken-pox 190.

Seventeen deaths occurred from zymotic diseases, viz:—Measles 6, Whooping-cough 2, Diphtheria and Membranous croup 1, and Diarrhœa 8.

Phthisis caused 6 deaths; respiratory diseases, 20; heart diseases, 18; accidents, 2; and premature birth, 11.

The birth rate and the zymotic death rate were the second highest recorded in rural districts. The infant mortality rate was the highest and the Phthisis death rate the lowest in rural districts.

The population of this district was estimated to have increased by about one hundred and seventy as compared with the previous year.

The medical officer divided his district into six localities, and gave for each sub-division the estimated population, the number of births and deaths registered and the deaths under one year; also for each district the number and nature of all cases of infectious disease, the months in which the notifications were received, the age period of all the persons attacked and the number removed to hospital.

He also added two further tables in one of which were indicated the number of deaths which occurred in each locality during each quarter of the year, and the age periods at which such deaths took place; in the other table were given for each sub-district the population, births and deaths registered, birth and death rate, infant mortality rate, death rate under five years, and the Phthisis, zymotic and respiratory death rates.

Sub-districts.	First Quarter.	Second Quarter.	Third Quarter.	Fourth Quarter.	Total.	Under 1 year.	1 and under 5.	5 and under 15	15 and Under 25	25 and under 65.	65 and upwards.	
Seaton Delaval...	20	14	29	19	82	36	6	2	3	14	21	Under 5 ... 42 } 5 and upwards 40 } 82
Hartley ...	7	5	3	4	19	6	6	1	0	3	3	Under 5 ... 12 } 5 and upwards 7 } 19
Horton ...	8	8	11	5	32	11	3	0	1	6	11	Under 5 ... 14 } 5 and upwards 18 } 32
Hartford West...	0	0	1	1	2	0	0	1	0	1	0	Under 5 ... 0 } 5 and upwards 2 } 2
Hartford East ...	2	2	5	0	9	2	2	3	0	1	1	Under 5 ... 4 } 5 and upwards 5 } 9
Bebside ...	0	0	0	0	0	0	0	0	0	0	0	
Whole district ...	37	29	49	29	144	55	17	7	4	25	36	Under 5 ... 72 } 5 and upwards 72 } 144

Sub-districts.	Population, Census 1901.	Population, estimated to middle of 1905.	Births registered in 1905.	Birth rate per 1,000 living.	Deaths registered in 1905.	Death rate per 1,000 living.	Infant mortality per 1,000 births.	Death rate under 5 years per 1,000 living.	Zymotic death rate per 1,000 living.	Phthisis death rate per 1,000 living.	Respiratory death rate per 1,000 living.
Seaton Delaval..	4,902	5,272	142	26·9	82	15·5	253	7·9	1·1	0·7	1·8
Hartley ...	1,617	1,788	75	41·9	19	10·6	80	6·7	1·6	0·0	2·7
Horton ...	2,111	2,197	57	25·9	32	14·5	192	6·3	3·6	0·9	2·2
Hartford West..	79	80	2	25·0	2	25·0	0	0·0	0·0	0·0	0·0
Hartford East...	667	868	37	42·6	9	10·3	54	4·6	0·0	0·0	4·6
Bebside ...	58	58	0	0·0	0	0·0	0	0·0	0·0	0·0	0·0
Whole district...	9,434	10,263	313	30·48	144	14·03	175	7·01	1·65	0·58	2·3

The cases of infectious disease notified, excluding Chicken-pox, indicate a reduction of forty as compared with the number obtaining for the previous year.

Scarlet fever occurred during every month of the year except March; the chief incidence of the disease being upon the Hartley and Seaton Delaval divisions. Diphtheria and Membranous croup occurred during every month except July and August, most of the cases being in the Hartley and Horton districts.

Enteric and Continued fever. The six cases of this disease were spread over the months of August, September, October and November; three of the six cases occurred in Hartford East.

Twenty-one of the thirty-four cases of Erysipelas were notified from the Seaton Delaval district.

Of non-notifiable infectious diseases Measles was prevalent, and at New Hartley became epidemic, necessitating school closure for a month in February. Whooping-cough, Influenza and Diarrhoea were also prevalent. The district was again entirely free from Small-pox and the cases of Enteric fever were few for a district of this character.

Taking the three hundred and twenty-six cases of notifiable infectious disease which occurred during the year the attack rate per 1,000 living worked out for each locality as follows:—

Infectious diseases.	Seaton Delaval.		Hartley.		Horton.		Hartford West.		Hartford East.		Bebside.	
	Cases.	Attack rate.	Cases.	Attack rate.	Cases.	Attack rate.	Cases.	Attack rate.	Cases.	Attack rate.	Cases.	Attack rate.
Small-pox ...	...	Nil.	...	Nil.	...	Nil.	...	Nil.	...	Nil.	...	Nil.
Diphtheria and Mem- branous croup	3	0·56	15	8·38	13	5·91	...	Nil.	6	6·91	...	Nil.
Erysipelas ...	21	3·98	5	2·79	8	3·64	...	Nil.	...	Nil.	...	Nil.
Scarlatina ...	18	3·41	30	16·77	7	3·18	1	12·50	2	2·30	...	Nil.
Enteric fever ...	1	0·18	1	0·55	1	0·45	...	Nil.	3	3·45	...	Nil.
Puerperal fever...	...	Nil.	1	0·55	...	Nil.	...	Nil.	...	Nil.	...	Nil.
Chicken-pox ...	82	15·55	56	31·31	52	2·36	...	Nil.	...	Nil.	...	Nil.

Factory and Workshop Act.—The factories and workshops numbered twenty-one; all were inspected and two defects were found, both of which were remedied during the year.

A report issued by the Property and Sanitation Committee of the county council in November, 1905, shows that in the Rural District of Tynemouth, during the years 1891-1901, the number of one-roomed tenements occupied by more than two and by more than four persons, the three-roomed tenements occupied by more than six persons, and the two-roomed tenements occupied by more than four persons had all decreased. The report also indicated that several back to back houses were to be found at Seaton Delaval and Seaton Sluice and also houses which though not built back to back were unprovided with through ventilation; that cases of overcrowding were found at Seaton Sluice and Silver Hill, and that at the last-mentioned place was a dilapidated house with neither drain, privy nor through ventilation.

Improvements.—Twenty-three new houses were occupied at Hartford East, and eleven at Seaton Delaval; at the last mentioned place a sewer was extended.

Requirements.—Water supplies for Red House Farm and New Hartley Station. The abolition of back to back houses, especially in Camp Terrace and Double Row, Seaton Delaval. Piping the sewage from Avenue Head to the sea. Abolition of all uneven surface channels and the substitution of pipe drains and gulleys. Improved drainage for Wheatridge Row and the provision of ash-pits for Camp Terrace, Seaton Delaval. Additional accommodation at Scaffold Hill Hospital and a steam disinfecter.

TYNEMOUTH No. 2.

Medical Officer of Health, R. BUTTERCASE, M.D., C.M.

Area, 7,240 acres; estimated population, 13,580; birth rate, 34.38; general death rate, *13.99; zymotic death rate, 1.84; infant mortality rate (per 1,000 births), 149.89; Phthisis death rate, 1.1; death rate from respiratory diseases, 1.76.

With the exception of the birth rate which has increased by 3.51, all the above rates have decreased as follows:—General death rate, 1.0; zymotic death rate, 0.87; infant mortality rate, 33.03; Phthisis death rate, 0.18; and the respiratory death rate, 0.49.

Four hundred and sixty-seven births were registered during the year, and one hundred and ninety deaths; of the latter seventy were of children under one year, and thirty-seven of persons sixty-five years and upwards.

Two hundred and eighty-one cases of infectious disease were notified as follows:—Small-pox 4, Diphtheria 5, Membranous croup 1, Erysipelas 19, Scarlet fever 96, Enteric fever 10, Continued fever 1, Puerperal fever 1, and Chicken-pox 144.

Twenty-five deaths occurred from zymotic disease, viz:—Small-pox 3, Scarlet fever 1, Whooping-cough 2, and Diarrhœa 19.

Phthisis caused 15 deaths; respiratory diseases, 24; heart diseases, 7; accidents, 4; and premature birth, 25.

The population of this district was estimated to have increased by three hundred since the previous year.

The birth rate and the zymotic death rate were the highest recorded in rural districts. The infant mortality rate was the second highest and the general and Phthisis death rates were each the third highest in rural districts, nevertheless, as is indicated in the second paragraph above, although the birth rate showed an increase, the general death rate, the infant mortality rate, the zymotic and Phthisis and also the respiratory death rates indicated a decrease as compared with the previous year.

The medical officer divided his district into three localities and gave for each sub-division the estimated population, the number and nature of all cases of infectious disease, the months in which the notifications were received, the age period of all persons attacked and the number removed to hospital.

He also added other tables, in one of which were indicated the number of deaths which occurred in each locality during each quarter of the year and the age periods at which such deaths took place; in another were given for each sub-district the population, the births and deaths registered, the general, the zymotic, the Phthisis and the respiratory death rates, the infant mortality rate per 1,000 births, and the death rate under five years.

The first of the following tables indicates the number of deaths which occurred in each sub-district during each quarter of the year, and also the periods at which the deaths took place. The second table indicates the populations, births and deaths registered, and the birth rate and various mortality rates for each sub-division.

Sub-districts.	First Quarter.	Second Quarter.	Third Quarter.	Fourth Quarter.	Total.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.	
Longbenton ...	30	24	38	24	116	44	12	4	6	31	19	Under 5 ... 56 } 5 and upwards 60 } 116
Burradon and } Camperdown }	15	9	7	7	38	9	5	1	3	8	12	Under 5 ... 14 } 5 and upwards 24 } 38
Willington and } Rosehill }	7	6	11	12	36	17	2	0	5	6	6	Under 5 ... 19 } 5 and upwards 17 } 36
Whole District...	52	39	56	43	190	70	19	5	14	45	37	Under 5 ... 89 } 5 and upwards 101 } 190

Sub-districts.	Population, Census, 1901.	Population, estimate to middle of 1905.	Births registered in 1905.	Birth rate per 1,000 living.	Deaths registered in 1905.	Death rate per 1,000 living.	Infant mortality per 1,000 births.	Death rate under 5 years. per 1,000 living.	Zymotic death rate per 1,000 living.	Phthisis death rate per 1,000 living.	Respiratory death rate per 1,000 living.
Longbenton ...	7,148	9,000	303	33·66	116	12·88	145·21	6·22	1·33	1·11	1·11
Burradon and Camperdown	2,157	2,300	74	32·17	38	16·52	121·62	6·08	1·30	1·30	2·60
Willington and Rosehill	1,999	2,280	90	39·47	36	15·79	188·88	8·33	4·38	0·87	3·50
Whole district.	11,304	13,580	467	34·38	190	13·99	149·89	6·55	1·84	1·10	1·76

The district was again visited by Small-pox; two cases occurred in January at Burradon; one in February and one in March, both being in Rosehill. Cases of Scarlet fever occurred during every month of the year, and in each sub-district, the chief incidence of the disease being upon the Burradon district.

The six cases of Diphtheria and Membranous croup were confined to the Long Benton district, as were also all the cases of Enteric and Continued fever and the one case of Puerperal fever. The nineteen cases were divided between the Long Benton (10 cases) and Burradon (9 cases) divisions. Taking the cases of notifiable infectious diseases which occurred during the year, the attack rate per 1,000 living worked out for each locality as follows:—

Infectious Diseases.	Longbenton.		Burradon and Camperdown.		Willington and Rosehill.	
	Cases.	Attack Rate.	Cases.	Attack Rate.	Cases.	Attack Rate.
Small-pox	—	Nil.	2	0·87	2	0·87
Diphtheria	5	0·55	—	Nil.	—	Nil.
Erysipelas	10	1·11	9	3·91	—	Nil.
Scarlet fever	69	7·66	16	6·95	11	4·82
Enteric fever	10	1·11	—	Nil.	—	Nil.
Chicken-pox	94	10·44	47	2·04	3	1·31

Very few cases of non-notifiable infectious diseases were present in the district; in the month of May a few cases of Whooping-cough and Measles occurred and the latter disease was prevalent in September.

Factory and Workshop Act.—The factories numbered four and the workshops twenty-three; all were inspected during the year and the one defect discovered was remedied.

A report issued by the Property and Sanitation Committee of the county council in November, 1905, shows that, between the years 1891 and 1901, the number of one-roomed tenements in the Tynemouth Rural District occupied by more than two and by more than four persons, the three-roomed tenements occupied by more than six persons, and the two-roomed tenements occupied by more than four persons had all decreased. The report also showed that back to back houses were found at West Moor, Burradon and Camperdown, though the houses in one row at the place last-mentioned were being connected with double houses; also that a considerable amount of overcrowding in houses had been dealt with, although one or two instances were found in Burradon and Camperdown.

Improvements.—Additional houses were built at Forest Hall, Longbenton, Low Gosforth, and at West Allotment, and nearly twenty back to back houses at Camperdown were connected with double houses.

The water supply for the following places was greatly improved:—Killingworth East, house, farm and cottage, a polluted well closed and new supply obtained from Newcastle and Gateshead Water Co. Battle Hill Farm (hind's cottage), arrangements made for adequate supply. Craister Pit and Elwicke Pit near Willington High Row—wells subject to surface pollution protected and pumps supplied.

The Willington Gut nuisance was at last abated by giving the Rosehill sewer to one of the main sewers of the Willington Quay urban district. Negotiations were entered into between the Tynemouth rural district council and the council of the Walker urban district with the object of draining the houses at Bigge's Main and Little Benton into one of the Walker sewers. After several months had passed without any definite arrangement having been made, the urban district of Walker was absorbed by the City of Newcastle-on-Tyne; fresh negotiations were then commenced with the Corporation of Newcastle with a view of carrying out the plan above mentioned. At the end of the year no decision had been arrived at. The main sewer was extended from Palmersville to Benton Square Schools, and the ventilation of the sewer between Forest Hall and Benton Station was much improved.

Over seven hundred yards of defective drains were relaid and considerable progress was made in making up streets and paving footpaths in Forest Hall, Burradon and West Allotment. An increased amount of scavenging was carried out by the council with most satisfactory results, both as regards efficiency and economy.

Some cases of overcrowding were dealt with.

Requirements.—A large number of back to back houses in Benton, Gosforth Rows and Camperdown should be connected with double houses. A water supply was required for Haslam's Cottages, Forest Hall. A sewerage and sewage disposal scheme for Little Benton and Bigge's Main. Abatement of the pollution of the Wallsend Burn by crude sewage from the above-named localities.

Flushing chambers for some of the sewers at West Allotment.

Additional accommodation at Scaffold Hill Hospital, and a steam disinfecter.

* 14·21 if the death of one non-resident occurring within the district be deducted and if four deaths of residents occurring outside the district be added.

a 16-69 if the deaths of 5 non-residents occurring in the district be deducted, and if 10 deaths of residents occurring without the district be added.

b 17-69 if 10 deaths of non-residents occurring in the district be deducted, and if 2 deaths of residents occurring outside the district be added.

c 12-69 if the deaths of 3 residents occurring outside the district be added.

d 16-47 if the deaths of 9 non-residents occurring in the district be deducted.

e 15-68 if the death of 1 non-resident occurring in the district be deducted.

f 12-43 if the deaths of 9 non-residents occurring in the district be deducted, and if the deaths of 2 residents occurring without the district be added.

g 20-35 if the deaths of 1 resident occurring beyond the district be added.

h 16-99 if the death of a non-resident occurring in the district be deducted, and if the deaths of 4 residents occurring outside the district be added.

i 13-41 if the deaths of 117 non-residents occurring in the district be deducted.

j 14-12 if the deaths of 12 non-residents occurring in the district be deducted.

k 16-21 if the deaths of 3 non-residents occurring in the district be deducted.

l 9-08 if the death of 1 non-resident occurring in the district be deducted, and if the deaths of 5 residents occurring without the district be added.

n 18-38 if the deaths of 2 non-residents occurring in the district be deducted, and if 11 deaths of residents occurring outside the district be added.

A 14-47 if the deaths of 6 non-residents occurring within the district be deducted.

B 12-8 if the death of 1 resident occurring outside the district be added.

C 14-7 if 121 deaths of non-residents occurring in the district be deducted, and if 3 deaths of residents occurring outside the district be added.

D 14-21 if the death of 1 non-resident occurring within the district be deducted, and if 4 deaths of residents occurring outside the district be added.

* 19-9 if 57 deaths of non-residents occurring in the borough be deducted, and if 16 deaths of residents occurring outside the borough be added.

